Gc
977.6
M13m
1400163

M. L.

GENEALOGY COLLECTION

ALLEN COUNTY PUBLIC LIBRARY
3 1833 01715 9051

Health Institute & Movement Cure,

291 THIRD STREET, ST. PAUL, MINN.

We Treat all Forms and Phases of Disease.

ELECTRIC BATHS.

This bath occasions the elimination of mercury and other poisons, and is beneficial in the treatment of NEURALGIA, RHEUMATISM, PARALYSIS, FEMALE WEAKNESSES, EPILEPSY, and other Chronic Ailments.

RUSSIAN VAPOR BATHS.

This celebrated bath is very beneficial in relieving Colds, Billiousness, Torpidity of the Skin, Rheumatism, besides being a real luxury to be enjoyed by all.

THE MOVEMENT CURE

We regard as one of the most effectual appliances known for the Cure of *Consumption, Paralysis, Uterine Displacements, Spinal Curvature, Torpidity of the Liver and Kidneys, Constipation, Imperfect Circulation, Coldness of the Extremities, Spermatorrhœa, &c.*

THE LIFTING CURE.

Dr. Butler's Centre Lifting Machine is, without qualification, the best apparatus ever devised for securing the harmonious and co-operative action of the Heart, Lungs, Liver, Spleen, Kidneys, and whole Muscular system. It gives a sense of equalizing power and efficiency to the organs and functions of the brain and body; it builds up the weak functions and equalizes the life forces; it soothes and tranquilizes the nervous system, and is adapted to both sexes.

Send Stamp for Circular.

JOHN SMITH & CO., PROPRIETORS.

P. O. Box, 973.

CATHCART & CO.

(ESTABLISHED 1852,)

Foreign and Domestic

DRY GOODS,

132 THIRD STREET.

WM. GOLCHER,

No. 180 Third Street,

Manufacturer of and Dealer in all kinds of Muzzle and Breech-Loading

SHOT GUNS AND RIFLES.

The style and workmanship cannot be excelled in the United States.

A full supply of Gun Makers' Materials, Metallic Cartridges, Fishing Tackle, Pocket Cutlery, Skates, Newhouse Traps, &c.

Notarial and County Seals Made to Order.

REPAIRING PROMPTLY DONE.

OLD AND RELIABLE.

Minnesota Scenery.

WHITNEY & ZIMMERMAN,

Photographers.

Whitney's Gallery, Saint Paul, Minnesota,

ESTABLISHED 1850,

Has the LARGEST, MOST COMPLETE, and BEST COLLECTION OF MINNESOTA SCENERY in the State.

MINNE-HA-HA, Falls of St. Anthony, Fort Snelling, River Views,

In fact everything unsurpassed. A large collection of Portraits of Indian Chiefs, Braves, Squaws, Indian Scenes, &c.

All the principal views in size for framing. Everything in Card size. Making our own Negatives and publishing our own Views, purchasers can rely upon getting the best.

Cards $1.50 per doz.; 15 cents single. Stereographs $3.00 per doz.; 30 cents single. Sent by mail on receipt of price.

ORDER SAMPLES.

A LIBERAL DISCOUNT TO THE TRADE.

WHITNEY & ZIMMERMAN,

SAINT PAUL, MINN.

PORTRAITS IN EVERY STYLE.

Martin's Art Gallery,

SAINT PAUL. MINN.

PAINTINGS, ENGRAVINGS, CHROMOS.
MINNESOTA AND FOREIGN VIEWS.
FRAMES, BRACKETS, STATUETTES.

SAINT PAUL, MINN.

Martin's Art Gallery.

SCHRODER'S MUSEUM,

290 Third Street, near Winslow House,

ALL THE VARIETIES OF MINNESOTA BIRDS,

Over 100 in number, besides 75 varieties of European Birds.

NATURAL AS LIFE,

Prepared and ON EXHIBITION.

ALSO THE

Wild Animals and Natural Curiosities of the State.

Duplicates of all for Sale, as Suitable Ornaments for the yard and parlor.

STRANGERS, VISITORS AND TOURISTS will find this one of the most pleasant places of resort in the city.

Cash Paid for Birds, Bird Skins, Deer, Elk and Buffalo Heads, &c., &c.

PET BIRDS PREPARED AT THE SHORTEST NOTICE.

THE

New-York Freeman's Journal,

FOR YEAR 1870.

The *Freeman's Journal*, based on the traditions of the Fathers of the Republic, and deflecting neither to one extreme or the other, holds up the old standard of

A UNION OF STATES,

IN ONE FREE AND CONSENTED GENERAL GOVERNMENT.

It maintains the inherent rights of States to their own internal government.

It maintains that those, by the free act of each State, invested with the rights of freemen, are the only ones that should control a State.

It maintains the right of Freemen to have a Free State.

It maintains that *White men* should have a government of White men.

It maintains that, in departing from the political landmarks our forefathers set up, we have gone wrong; and that our only wise policy is to hunt back, and recover the *spirit*, and so far as possible, the *forms*, that are established.

It maintains that "Revolution" is not true or healthy "progress."

TERMS:

One copy, one year, by mail, - - -	$ 3 00
" six months, " - - -	1 50
" three " " - - - -	75
Six copies, one year, " - - -	15 00
Ten " " " with an extra copy to the person forwarding the money - - -	22 50
Twenty copies, one year, by mail, with two extra copies to the person forwarding the money,	40 00

In all cases Subscribers' names will be on their papers.

All communications should be addressed to

JAS. A. McMASTER,

Editor and Proprietor,

5 Tryon Row, N. Y.

WM. DAWSON. R. A. SMITH. ALBERT SCHEFFER.

DAWSON & CO.

Bankers

SAINT PAUL, - MINNESOTA.

Collections will Receive Special Attention.

Dr. J. N. McKELVEY,

Physician and Surgeon,

A Graduate of Jefferson Medical College of Philadelphia.

SPECIAL ATTENTION GIVEN TO

DISEASES of the NOSE, THROAT & LUNGS.

Consumption, Bronchitis, Asthma, and Nasal Catarrh,
cured with

DR. ABBOTT'S INHALING FLUID.

OFFICE HOURS—9 to 12 A. M., and 1 to 4 P. M.

CONSULTATION FREE.

Address, J. N. McKELVEY, M. D.,

No. 130 Third Street, Saint Paul, Minnesota.

Reference to Capt. I. C. George.

G. W. & A. P. MERRILL,

BUILDERS AND CONTRACTORS,

MOULDINGS, PLANING, SAWING, &c., &c.

SHOP ON FIFTH STREET,

Bet. Cedar and Wabashaw,

SAINT PAUL, MINN.

LOUIS KRIEGER. J. M. KELLER.

KRIEGER & KELLER,

Manufacturers of and Dealers in

Lumber, Lath, Shingles,

PICKETS AND MOULDINGS,

Corner Seventh and Minnesota Streets,

ST. PAUL, MINN.

All Varieties of BUILDING PAPER constantly on hand.

WILSON & WORLEY,

PLUMBERS,

GAS AND STEAM FITTERS.

HOUSES FITTED WITH

Planished Copper Baths, Water Closets, Marble Wash Basins, Copper Boilers, Lift and Force Pumps, and Lead and Iron Pipe, for Water, Steam and Gas.

MANUFACTURERS OF

HOT AIR FURNACES

AND

COOKING RANGES.

Care and attention given to Heating Public and Private Buildings.

DEALERS IN

PARLOR & COOK STOVES,

Brass Cocks, Pumps, Sheet Lead, Registers and Ventilators.

WORK DONE IN ANY PART OF THE STATE.

No. 197 Third Street, St. Paul, Minn.

BUSINESS EDUCATION.

YOUNG MEN, PREPARE FOR BUSINESS—THE SURE ROAD TO SUCCESS.

The ST. PAUL COMMERCIAL COLLEGE is one of the Institutions comprising THE

GREAT INTERNATIONAL CHAIN

OF

BUSINESS COLLEGES,

Embracing near fifty first-class Institutions in the U. States and Canadas.

A FULL SET OF TEXT BOOKS AND BLANKS, embracing every needful variety of *Business Forms*, prepared expressly for this chain of Colleges.

Most thorough, comprehensive, and practical course of instruction ever introduced, and many thousands of the graduates of these Colleges, both male and female, are filling lucrative and responsible stations of trust.

Three Hundred Professors, Teachers, and Lecturers employed, thus making it the greatest educational enterprise in the world.

The St. Paul Business College is the Oldest, the Largest, and the Best in the State.

PROF. W. A. FADDIS, an Educator of upwards of twenty-five years, Resident Prin.

ALL THE DEPARTMENTS FAIRLY REPRESENTED.

Book Keeping, Commercial Arithmetic, Commercial Law, Penmanship, Business Correspondence, Business Practice, Political Economy, Banking, Phonography, Orthography, Detecting of Counterfeit Bankbills at sight, Card Writing, the Customs of Trade, &c., thoroughly taught and illustrated.

Any Person Purchasing a Life Scholarship for the Commercial Course will receive such instruction in the English branches as they desire, without extra charge.

COLLEGE ROOMS OPEN DAY AND EVENING. Those unable to attend during the day can receive a full course of instruction at the Evening Sessions.

The College Rooms are centrally located in the most pleasant part of the City, and command charming views of the River and surrounding Bluffs.

Life Scholarships Issued in St. Paul, good throughout the Chain.

For Circulars, giving full particulars, Address—

W. A. FADDIS, or,
BRYANT & STRATTON BUSINESS COLL.,
ST. PAUL.

GEO. P. PEABODY,

Wholesale Dealer in

WINES, LIQUORS AND CIGARS,

No. 107 THIRD STREET,

ST. PAUL, MINNESOTA.

A. L. LARPENTEUR,

WHOLESALE

COMMISSION MERCHANT,

And GENERAL MERCHANDISE BROKER.

Agent for Buffalo Standard Scale Works. Office 80 Third Street, Merchants' Hotel Block, St. Paul, Minn.

REFERENCES:—First National Bank; B. Presley; Beaupre & Kelly; J. C. Burbank; N. W. Kittson.

GEO. PALMES.

FASHIONABLE TAILOR,

149 THIRD STREET,

An elegant Stock of all the Newest Styles of Imported Goods always on hand, which we make to order in the most modern and *recherche* manner.

CENTRAL HOUSE,

Minnesota, near Third Street.

FRONTING RIVER AND RAILROAD DEPOT.

GEO. PULFORD, Proprietor.

Located in the Centre of Business.

Head-Quarters for Invalids and Tourists.

W. J. GODFREY, 95 JACKSON STREET, ST. PAUL,

DEALER IN

ENGLISH AND SCOTCH ALES,

LONDON AND DUBLIN PORTERS,

Genuine Old Port, Madeira, Sherry and Champaigne WINES, Rum, Brandies, LONDON AND HOLLAND GINS, imported by himself, and warranted pure. Packages expressly for hunting parties, invalids, &c., who are invited to call and test the truth of this card.

M. B. FARRELL,

CONTRACTOR & BUILDER,

ALSO

BRIDGE BUILDER.

SHOP FORT, NEAR THIRD,

RESIDENCE, PLEASANT STREET,

ST. PAUL, - MINNESOTA.

Contracts taken for Building Bridges in any part of the State, on the Howe Truss or other plan.

REFERS TO—Gen. J. W. Bishop, Chief Engineer of the St. Paul & Sioux City R. R., for whom he has built bridges for said road.

ISAAC STAPLES. PETER BERKEY.

STAPLES & BERKEY,

MANUFACTURERS AND DEALERS IN

LUMBER, LATHS, SHINGLES, &c.

Seventh Street, between Jackson and Sibley, St. Panl, Minn.
St. Croix Mills at Stillwater.

J. H. POMROY & CO.

Dealers in FURNITURE, BEDDING, WALL PAPER, WINDOW SHADES, and HOUSE FURNISHING GOODS,

197 Jackson Street, St. Paul.

L. BEACH & CO.

Soap & Candle Manufacturers

EAGLE STREET, UPPER TOWN,

ST. PAUL, MINN.

Extra No. 1 Soap, White Chemical Soap, Palm Soap, German Soap, Mould Candles, Summer Pressed Candles, SOAP FOR WOOLEN MILLS, Extra Scouring and Fulling Soap, Fulling Soap, Scouring Soap, White Scouring Soap, No. 1 Pot Ash.

ANDREW FOOS,

WHOLESALE AND RETAIL

DEALER IN WOOD

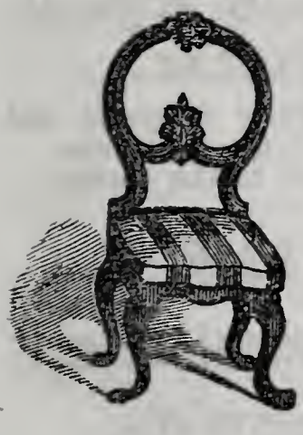
UPPER LEVEE, ST. PAUL.

Sells 6000 to 8000 cords annually, and delivers to all parts of the city.

S. L. BAILEY. AUG. ROEDLER.

S. L. BAILEY & CO.

Manufacturers of and Dealers in



FURNITURE

OF EVERY VARIETY.

Looking Glasses.

WARE-ROOMS, 244 THIRD STREET,

ST. PAUL, MINN.

HENRY J. HORN.

Attorney and Counsellor at Law,

McCLUNG'S BLOCK, ST. PAUL, MINNESOTA.

J. G. HUSSEY,

Attorney and Counsellor at Law, Real Estate Agent, &c.

DULUTH, - - MINN.

Having made an Abstract of the Lands of Duluth, and Saint Louis County, gives me a knowledge equal to any other in matters relating to Real Estate. Persons coming to Duluth will be benefited by calling at my office.

WM. MORRIN,

General Dealer in Real Estate

ALBERT LEA, FREEBORN COUNTY, MINN.

W. D. HURLBUT,

Dealer in REAL ESTATE,

ROCHESTER, - - MINNESOTA.

AARON S. EVEREST,

ATTORNEY AT LAW,

South Side of Public Square, - Austin, Minn.

DANIEL BUCK,

Attorney at Law and Real Estate Agent,

MANKATO, - MINN.

Special attention given to Buying and Selling Lands, Renting Property and Conveyancing; also prompt attention given to Court and Office Business. Takes no property for sale unless he is the exclusive agent in the county.

THOMAS CLARK, ATTORNEY AT LAW,

Probate Registrar and U. S. Court Commissioner,

382 SECOND STREET, SUPERIOR, WISCONSIN.

W. L. BRACKENRIDGE,

ATTORNEY AT LAW,

ROCHESTER, - - MINN.

C. EMMETT SWEET,

Real Estate and Insurance Office,

Corner of First Street, and Second Avenue East,

DULUTH, MINNESOTA.

Property Bought, Sold, Rented and generally managed. Special attention paid to the interests of non-residents. A large list of Business and Residence Property can always be found at my office.

GEO. A. McDOUGALL & CO.

Real Estate, Insurance and Collection Agents,

OFFICE 76 MAIN STREET, WABASHA, MINN.

Paying Taxes for Non-Residents; Locating Government Lands with warrants, scrip or cash; Loaning money; Selling Lands or other Property on Commission.

PATENT OFFICE BUSINESS.

American and Foreign Patents procured; Rejected Applications re-argued; Interference Cases prosecuted; opinions given as to the validity and infringements of patents; and suits prosecuted and defended in the U. S. Courts, by

THOS. H. DODGE.

(Formerly Principal Examiner, and Chairman of the Board of Appeals, U. S. Patent Office,) Counsellor at Law, and Advocate in Patent cases, Room 3, P. O. Building, Pearl Street, Worcester, Mass.

O. A. CHURCHILL,

Real Estate Agent & County Auditor,

LITTLE FALLS, MORRISON COUNTY, MINN.

DOES A GENERAL REAL ESTATE BUSINESS.

REFERS BY PERMISSION TO—Hon Joseph B. Nones, N. Y.; Douglass & Blackburn, Cincinnati, Ohio; Greely & Gale, St. Louis, Mo.; Holmes & Co., Chicago, Ill.; O. B. Turrill, Marine Bank, St. Paul, Minn.; Gen. W. D. Washburn, Minneapolis, Minn.: Bowen Bros., Chicago, Ill.

B. F. MILLER,

Civil Engineer, Surveyor & Draftsman.

County Surveyor of Wright County. Attends promptly to Paying Taxes for Non-Residents, Conveyancing, and Dealing in Real Estate.
Office, Upper Town, Monticello.

H. M. ATKINS,

Attorney at Law and Notary Public,

PRINCETON, - - MINNESOTA.

Will Make Collections, Pay Taxes, Buy or Sell, take charge of or enter Lands in Mille Lac or adjoining Counties. References given when required.

JACOB ARMEL KEISTER,

ATTORNEY AT LAW,

REAL ESTATE AND INSURANCE AGENT,

BLUE EARTH CITY, - - - MINN.

AUCTION AND COMMISSION.

Everything You Want for Housekeeping

CAN BE HAD AT

ALFRED MOORE'S

SECOND-HAND STORE,

At O'CONNOR'S OLD STAND, BRIDGE SQUARE,

SAINT PAUL,

AT ABOUT HALF-PRICE.

Parties about to furnish should give him a call, whether they want to **FURNISH A HOUSE FOR $20 or $2,000**—he will deal fairly with all. Eight years' reputation in St. Paul in the business is a guarantee that he will do the right thing by all his Customers.

Don't fail to see his Stock when you visit St. Paul.

ALFRED MOORE.

WILLIAM ROSENKRANZ,

MANUFACTURER AND DEALER IN

FURNITURE,

No. 229 THIRD STREET.

AUSTIN & ROSENKRANZ,

MANUFACTURERS OF

MINERAL WATER,

No. 233 THIRD STREET, ST. PAUL.

THOMAS BOWER,

Manufacturer of and Dealer in

FOREIGN & AMERICAN MARBLE MONUMENTS

GRAVE STONES, CEMETERY POSTS, &c.

Also Terra Cotta Urns, Flower Vases, and Ornamented Terra Cotta. Agent for the celebrated Red and Gray Scotch Granite.

No. 354 THIRD STREET, ST. PAUL, MINN.

UPPER TOWN.

S. J. AUSTIN.

Wholesale and Retail Dealer in MILLINERY AND STRAW GOODS,

Agent for Butterick's Patterns; also Dealer in Dress Goods, Trimmings, &c.

LADIES' FURNISHING GOODS GENERALLY.

6 Center Block, Nicollet Street, Minneapolis.

EAGLE BAKERY,

152 West Fourth Street, - - - St. Paul, Minn.

FABER & NATCHTSHEIM, Proprietors.

Manufacturers and Wholesale and Retail Dealers in Bread, Crackers, &c.

SNELLING HOUSE

A. MATTHEWS, Proprietor,

Cor. FORT & CHESTNUT STREETS, ST. PAUL, MINN.

This is one of the oldest established Hotels in the City. It is noted for its Comforts and Conveniences for Families and others travelling West.

In connection with the House is a first-class Stable, with charges to suit the times.

BAGGAGE TAKEN TO AND FROM THE DEPOT FREE OF CHARGE.

Terms, per Day, $1.50.

THE GREAT TRIAL

OF

SEWING MACHINES.

THE GRANDEST IN THE WORLD.

The Judges, the whole world, and the trial of fifteen years' duration; practical use, the test.

The Wheeler & Wilson the Champion,

THE UNIVERSAL VERDICT.

The distinctive feature of the WHEELER & WILSON MACHINE is the use of a ROTARY HOOK to carry the loop of the upper thread around the spool containing the under, making the lock-stitch alike on both sides of the fabric, thereby doing away completely with the vibratory motion of a shuttle, the tension upon the under thread, and all devices for taking up slack thread; these are necessary on all other two-thread Machines. The public have endorsed this principle by purchasing over **450,000** of our Machines—more than **100,000** in excess of those of any other manufacture! It has long been acknowledged by far the most simple lock-stitch Machine in existence; having one-third less machinery than any other two-thread Sewing Machine.

CAUTION.

Be not deceived by *misrepresentations* of interested parties; or by the *mistakes* of those who are honest in their errors.

REMEMBER

All Sewing Machines have *some* merit.

CONSIDER

That any person who has bought and *paid for* a Sewing Machine which is even passably good, and who has learned to use it to good advantage, will not readily understand or believe, that another can be better, and

BE ASSURED

Whatever good qualities others have, WHEELER & WILSON'S equals them in those *very same* particulars.

Whatever faults WHEELER & WILSON'S have, others have the same to the *same or a greater* degree.

Of all things that it is desirable for a family sewing machine to do, *none can do more* than WHEELER & WILSON'S.

Of all the things that WHEELER & WILSON'S machines do, none can be done *quicker*, *easier* or *better* on other machines.

WHEELER & WILSON'S machines do some things *easier*, some *quicker*, and some *better* than any other machine.

WHEELER & WILSON'S machines do some things that no other machines *can do* or *profess to do*.

WHEELER & WILSON'S machines *do* make the LOCK-STITCH, the *only one* which is *adapted to all kinds of work.*

WHEELER & WILSON'S machines *can* make *more different kinds* of stitches than any other machines in the world.

PRINCIPAL OFFICES:

202 Third Street, St. Paul.

Hollowell & West, Room 7, Johnston's Block, Minneapolis, up stairs.

G. H. Childs, Post Office Square, Winona, Minn.

Chas. Runnette, Mankato, Minn.

GENERAL TRAVELLING AGENTS:

MESSRS. J. S. DIXON and L. BUTLER.

OSCAR FARRAR, Gen'l Ag't

FOR STATE OF MINNESOTA.

G. W. & A. P. MERRILL,

BUILDERS AND CONTRACTORS,

MOULDINGS, PLANING, SAWING, &c., &c.

SHOP ON FIFTH STREET,

Bet. Cedar and Wabashaw,

SAINT PAUL, MINN.

CLEAR FOUNTAIN WELLS

AND

NON-FREEZING PUMPS.

Pure Water Obtained in from One to Three Hours.

The Subscriber has obtained Letters Patent from James Suggett, for improvement in the mode of operating and sinking wells, and the apparatus employed therein, for the State of Minnesota.

This well is made by driving into the earth a perforated tube, to the vein of water, and attaching a pump. The advantages of these wells are their cheapness and durability, the dispatch with which they can be put down, the ease with which they can be removed, their security against rats and all kinds of filth. No surface water can get into the well; and most important of all is the PURITY and COLDNESS of the WATER.

If water is found in open porous substances of sand or gravel, there will always be a supply of water to pump a week, day and night. One cannot exhaust the supply.

Pumps will not draw water only 33⅓ feet, and wells must not be more than 35 feet in which to work a good, easy, non-freezing Pump.

PUMPS, TUBING, POINTS, AND TOOLS

For Driving these Wells for Sale.

Also Town and County Rights or Leasing Territory on liberal terms. Any further information can be had by Letter or Circular.

I refer to the following business men of St. Paul, who have the Pumps in use—

C. H. BIGELOW,	E. M. DEAN,	A. H. CATHCART,
R. N. MCLAREN,	F. KNAUFT,	D. R. NOYES, JR.
J. W. MCCLUNG,	A. & L. B. MARTIN,	R. P. LEWIS.

HIRAM D. GATES,
Proprietor of Right for Minnesota.

J. E. THOMPSON, PRES'T. H. THOMPSON, CASHIER.

First National Bank,

Capital, $600,000.

DESIGNATED DEPOSITORY & FISCAL AGENT OF THE U. S.

ST. PAUL, MINN.

Deposits, Exchange, Gold, Government Bonds, and other Stocks.
Sight Drafts on all the Countries of Europe.

ESTABLISHED 1856.

BANKING OFFICE

OF

PARKER PAINE.

Exchange Sold on the Principal Cities in the United States, and England, Ireland, Germany, Norway, and Sweden.

INTEREST ALLOWED ON TIME DEPOSITS.

AGENT FOR CUNARD LINE OF STEAMERS;

ALSO

Agent for the Continental and Washington Fire Insurance Companies of New York.

JOSEPH LEWIS,

GENERAL COLLECTING AGENT

(Commissioner of Deeds for New York and Penn., and Notary Public,)

ST. PAUL, MINNESOTA.

Taxes paid and charge taken of property and collections in any part of the State, for non-residents or others.

Refers to Hon. Alex. Ramsey, U. S. Senator, St. Paul, for whom he has been agent for thirteen years.

NEW AGRICULTURAL WAREHOUSE.

BROWNELL & CO.,

55 JACKSON STREET, ST. PAUL, MINNESOTA,

SELL A BETTER CLASS OF

FARM MACHINERY

Than any House in the State.

SPECIALITIES. — Champion Reapers and Mowers, Dodge Reapers and Mowers, Massillon Reapers and Mowers, the justly celebrated Massillon Threshers, Grain Drills, Broadcast Seeders, Buckeye & Case's Sulky Corn Cultivators, Champion Steel-Tooth Hay and Grain Rakes, Grand Detour Plows, Fanning Mills, Feed Cutters, Corn Shellers, &c., &c.

All Goods warranted as represented, or Money will be refunded.

HEWITT'S

REAL ESTATE OFFICE

ST. PAUL, MINNESOTA,

(ESTABLISHED IN 1856.)

Sells Farms, Farm Lands, Dwellings, and Business Property, Makes Investments, Loans and Collects Money, Examines Titles, Pays Taxes, &c., &c.

(Correspondent for Capitalists.)

GIRART HEWITT,

Attorney at Law.

W. H. GRANT, Att'y. at Law. F. X. BROSSEAU, Notary Public.

GRANT & BROSSEAU,

DEALERS IN

LANDS, LAND WARRANTS,

AND

HALF-BREED SCRIP (Sioux & Chippewa Scrip.)

Money Loaned and Collections Made.

No. 94 THIRD STREET, ST. PAUL, MINN.

The Half-Breed Scrip enters the land prior to its survey, or before offered for Sale by the Government.

MORGAN & METCALF,

REAL ESTATE AGENTS

ST. PAUL, MINNESOTA.

We have constantly on hand and for Sale the most extensive and complete list of REAL ESTATE to be found in the State.

We attend to the Purchase, Sale, and Management of Real Estate, Payment of Taxes, Investment of Money, Collection of Rents, &c., &c., &c., and can always offer GOOD BARGAINS IN

St. Paul City Property,
Suburban Lots, Farms and Farming Lands,
Pine and Timber Lands.

We have had Fifteen years' experience in Real Estate operations in St. Paul and vicinity.

T. F. CHERITREE, New York.

F. B. FARWELL, G. L. FARWELL, } St. Paul.

CHERITREE & FARWELLS,

WHOLESALE DEALERS IN

HARDWARE,

NAILS, GLASS,

TINNERS' STOCK, AGRICULTURAL TOOLS, &c.

AGENCY OF

Shoenberger & Co's Nails, Sheet Iron, & Horse Shoes.

No. 99 THIRD STREET,

ST. PAUL, - - MINN.

JOSEPH I. BEAUMONT,

Wholesale and Retail Dealer in

WINES, LIQUORS

AND

CIGARS.

115 THIRD STREET, - ST. PAUL,

Next Door to the Office of the St. Paul Daily Pioneer.

Patentee of Beaumont's Air Escape Funnels,

Patented July 7, 1868, June 29, 1869.

CHOICE LIQUORS in Packages expressly for Invalids & Tourists.

MINNESOTA AS IT IS

IN 1870.

ITS GENERAL RESOURCES AND ATTRACTIONS FOR

Immigrants, Invalids, Tourists, Capitalists, and Business Men,

(Principally from Official Authorities.)

WITH SPECIAL DESCRIPTIONS OF ALL ITS

COUNTIES AND TOWNS,

THEIR TOPOGRAPHY, POPULATION, NATIONALITIES, PRODUCTS, BUSINESS, WEALTH, SOCIAL ADVANTAGES AND INDUCEMENTS TO THOSE IN QUEST OF

HOMES, HEALTH, OR PLEASURE.

By J. W. McCLUNG, ST. PAUL.

CONTAINING A TOWNSHIP MAP OF THE STATE, MADE EXPRESSLY TO ACCOMPANY THE BOOK (FOUR COLORS,) AND SHOWING THE GOVERNMENT LANDS IN EVERY COUNTY, WITH

OFFICIAL DESCRIPTIONS OF EVERY PART OF THE STATE,

BY GOVERNMENT SURVEYORS, TOPOGRAPHICAL ENGINEERS, GEOLOGISTS AND TRAVELLERS.

PUBLISHED BY THE AUTHOR.

1870.

DEDICATION.

To the Immigrant, Invalid, Tourist, Capitalist, Business Man or any other man who buys this book and pays the price, viz.:

$1.75 with Cloth Binding,
$1.25 " Paper "
50 cts. Extra with the Map,

It is most respectfully dedicated, with the hope that the facts and information communicated may "pay."

Sent by mail, post paid, on receipt of price. Full colored township map, showing all railroads finished or projected, new towns, post roads, &c., 50 cts. without the book.

Entered according to Act of Congress, in the year 1870,
By J. W. McCLUNG,
In the Clerk's Office of the District Court of the United States for the District of Minnesota.

ERRATA.—Page 14, elevation at Snake River, 1015 feet should be 933; at Kettle River, 946 should be 1001. Page 33, Featherstonhaugh should be Featherstonaugh; and on 91 Wilton should be Milton. On page 20, number of lakes in the State corrected in page 179. Personal property of Ramsey County, page 277, should be $2,161,488 instead of $2,554,377; and on page 279, 12 miles should be added to the railroad lines built in 1869, for the Central road from Austin to State line.

Printed by the Press Printing Co.,
St. Paul.

1400163

PREFACE.

It was the intention of the writer of the following pages to have issued an octavo volume of 400 or 500 pages in 1868, with engravings of scenery, the handsome buildings of the State, and other objects of interest, together with brief sketches of the first settlements of the counties, in addition to the matter embraced in this volume; and to this end printed circulars were sent to all the counties, with over 20 questions, which elicited materials enough to make a book of 1200 pages. But wheat declined from $2.50 to 80 cts. and $1 in the autumn of 1868; and with this decline, a shadow was cast over the book trade, and it became evident that an octavo book to sell at $3.50 would fail either to benefit the State or to remunerate the writer. A change of base was therefore determined on, and the delay in the publication of the volume was caused by the increased labor of gathering new facts to keep pace with the rapid growth of the State, and condensing the matter already gathered, in such an abridged form as would give to the public all the practical information possible, and at the same time a book small enough and of a price to be within the reach of the people. To make a large book was easy enough. To make a small book, and yet comprehensive and attractive, was a more difficult work. To do this the writer has been compelled to put a curb upon his pen and to curtail many matters which would have added greater interest and variety to the book, and to circumscribe the whole within such limits as rather tend to cramp and impair its value, and detract from the State some of the unrivaled attractions and beauties with which a flowing pen and an untrammeled *carte blanche* of space would have invested it.

To give credibility to its statements, the writer has endeavored to quote official or disinterested authority for every fact, rather than rest it upon his own language—the tendency of western writers upon western interests to exaggerate and color their statements, together with their self interest, making this

necessary to prevent any western book from passing at a discount. Such official and disinterested authority had been published in great abundance. But it was lying idle and dumb upon the shelves of State libraries, or in historical societies or executive State documents, weighed down with heavy learning, or mingled with other irrelevant subjects, or bound in such voluminous pages as to be sealed books, or scattered in disjointed forms in the columns of newspapers, where it only dispensed a meteoric light.

The task of the writer has been to brush off the dust from these musty documents, and put their authors on the stand, to testify specially in behalf of Minnesota; to dig among the mines, and separate that which was valuable to Minnesota from that which encumbered it; to gather into popular shape, for the popular reader, these valuable materials, and combining them with local statistics of the counties and towns, endeavor by their use to spread upon the canvas a faithful portrait of "Minnesota as it is in 1870."

For local items in reference to their counties and towns, and valuable assistance, he acknowledges his indebtedness to the following gentlemen in the counties named.

Anoka County, J. F. Blodget, now of St. Paul; Benton County, Dr. McMahon, Sauk Rapids; Blue Earth, Daniel Buck, Mankato; Carver, Joseph Weinman, Carver; Chisago, Hon. Ansel Smith, Franconia, now Duluth; Douglas, Hon. L. K. Aaker, Alexandria, and Geo. B. Wright, Minneapolis; Faribault, Jacob A. Kiester, Blue Earth City; Fillmore, J. E. Burbank, Preston; Freeborn, Wm. Morin, Albert Lea; Goodhue, Dr. W. W. Sweeney, Red Wing; Hennepin, Col. J. H. Stevens, Minneapolis; Houston, N. E. Dorival, Caledonia; Isanti, Hon. Stephen Hewson, Oxford; Jackson, Geo. C. Chamberlain, Jackson; Kandiyohi, Mark W. Piper, and A. C. Smith, Forest City; Le Sueur, Henry Swann, Le Sueur; Martin, O. P. Chubb, Fairmount; McLeod, Wm. A. McWright, Glencoe, and Lewis Harrington, Hutchinson; Meeker, A. C. Smith and Mark W. Piper, Forest City; Monongalia, A. C. Smith, Forest City; Mille Lac, H. M. Atkins, Princeton; Morrison, O. A. Churchill, Little Falls; Mower, Hon. Geo. M. Cameron, Austin; Nicollet, Wm. G. Hayden, St. Peter; Olmstead, W. D. Hurlbut, Rochester; Pope, A. W. Lathrop, Glenwood; Rice, F. W. Frink, Faribault and Dr. L.

H. Kelly, Northfield; St. Louis, Hon. Luke Marvin; Scott, Robt. H. Rose, Belle Plaine, and L. R. Hawkins, Maple Glen; Sherburne, Wm. Tubbs, Elk River; Sibley, Daniel Picket, Henderson; Stearns, O. E. Garrison, St. Cloud; Steele, J. H. Abbott, Owatonna; Todd, A. D. Brower, Round Prairie; Wabashaw, W. J. McMasters, Lake City, and Capt. J. H. Arnold, Wabashaw; Washington, Hons. Wm. Holcomb, and J. N. Castle, Stillwater; Watonwan, Thomas Rutledge, Madelia; Winona, D. Sinclair, Winona; Wright, B. F. Miller, Monticello.

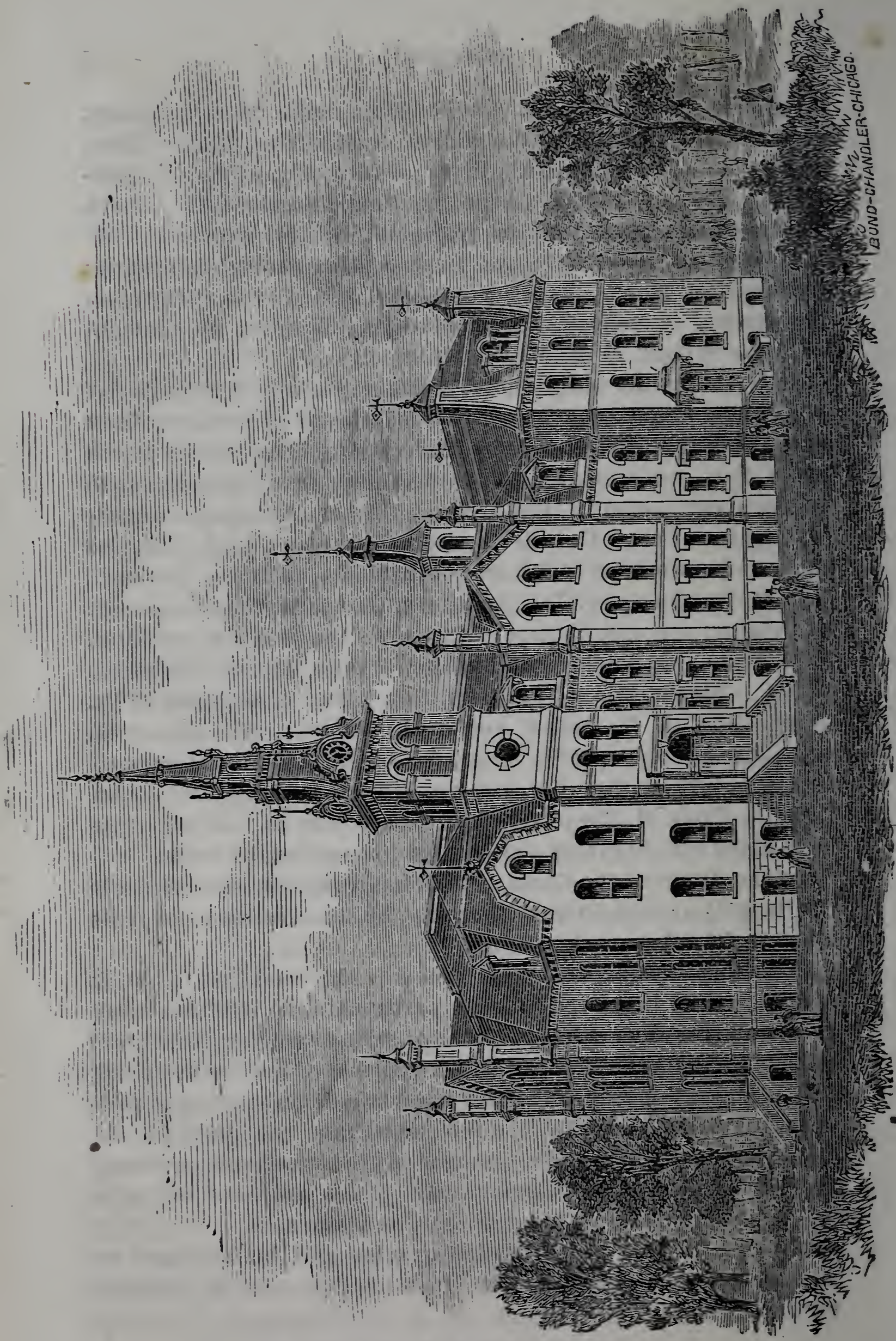
He is also under obligations to State Auditor McIllrath for free access at all times to assessors' returns of property from all the counties; to Col. Rogers, Secretary of State, and Pennock Pusey, Esq., Assistant, for much official matter; to Gov. Marshall for documents, and to Hon. Geo. L. Becker, Joseph A. Wheelock, Editor Press, Col. D. A. Robertson, and A. J. Hill, for books and authorities which were invaluable; to Dr. A. Barnard, Geo. B. Wright, Capt. Jos. Anderson, Gen. J. W. Bishop, and H. M. Atkins, for information relative to the frontier; to Hon. L. K. Stannard, Taylor's Falls, Hon. Henry Hill, of Litchfield, Geo. C. Chamberlain, of Jackson, Hon. Chas. A. Gillman, of St. Cloud, Hon. L. K. Aaker, and J. H. Vandyke, of Alexandria, and Tillson Tibbets, of St. Peter, for Land Office statistics; and to Bishop Grace, Rev. Dr. Brown, Horace Greeley, Rev. John Ireland, Chas. H. Sweetzer, and others who in various ways have aided him in giving variety and interest to the book.

To the Press of the State, which has generally seconded his efforts with an enlightened liberality, he also desires to express his grateful acknowledgments.

Conscious that he does not "know it all," and that his book may be greatly improved in many particulars, he will thank any gentleman for any criticism, either of style or matter, which will remedy its defects and make it more perfect or accurate; and as it is his intention to push off the present edition as soon as possible and publish another in a few months, he will thank his old correspondents or any new ones for any information concerning their counties or towns, which will give a more correct or a fuller account thereof than that here published.

Any information sent from any quarter will be treasured up and used for the benefit of the State or Counties in the next edition.

St. Paul, January 15th, 1870.



NORMAL SCHOOL, WINONA.

CONTENTS.

PART FIRST.

CHAPTER I.

NATURAL FEATURES AND GENERAL VIEW OF THE STATE.—Area and boundaries—General surface of the country—Elevations above the sea, height of bluffs—Different varieties and analyses of soils—Timber and prairie divisions compared with Iowa—"Big Woods"—Water, Lakes and Rivers—Natural meadows and grass—Yield per acre and cost of saving—Summary of natural advantages. Pages 13 to 24.

CHAPTER II.

POPULATION AND NATIONALITY.—Growth in population compared with other States—Growth in wealth from 1849 to 1868—Increase of live stock. Pages 24 to 28.

CHAPTER III.

OFFICIAL DESCRIPTIONS OF EVERY PART OF THE STATE.—Eastern Minnesota, by Owen, Abert, Wheelock, and Clarke—Swamps of the north-east, and facilities for drainage—Pineries—Minnesota Valley and South-western Minnesota, by Nicollet, Carver, and Featherstonaugh—Western Minnesota, by Nicollet and Gen. Bishop—North-western Minnesota, by Pope, and "Carleton" of the *Boston Journal*—"Big Woods" described—Red River Country, by Owen, Pope, and Capt. Anderson—Southern Minnesota, by Abert, Nicollet, Owen, and Wheelock—Northern Minnesota, by Dr. Barnard, Rev. John Mattocks, Owen, Norwood, Wheelock, Nicollet, Hanchette, and Clarke—Its cascades, scenery, minerals, pineries, elevations—Sources of the Mississippi. Pages 28 to 52.

CHAPTER IV.

CLIMATE—GENERAL VIEW.—Official descriptions in brief by Col. Abert, Dr. Owen, and Col. Whittlesey—Army statistics—Letters from Bishop Grace, Rev. Drs. Bushnell, Brown, and Boardman. Pages 52 to 57.

CHAPTER V.

HEALTH—A CHAPTER FOR INVALIDS.—Official testimony of Pope, Abert, Owen, Dr. Leas, Consul at Madeira, and U. S. Surgeon Wood—Testimony of Disturnel's book on climates, Dr. R. T. Trall, and Horace Greeley—Letters from invalids cured: their experience of the climate, country, and people, fishing, hunting, &c.—Who should and who should not come—Mortality compared with other American and European States—Dr. Mattocks' report and letter—Should consumptives go North or South?—Mortality of American cities compared. Pages 57 to 72.

CHAPTER VI.

THEORY OF THE CLIMATE.—Its anomalies explained—Daily and mean temperature compared with that of other places—Spring, summer, autumn, and winter described—Daily record of two winters—How often it is below zero—When cold here, cold everywhere. *Effect of Winds.*—Dr. Kane's experience—Dr. Owen—Absence of wind during cold terms—Prevalence of southerly winds. *Dryness of the Air—Statistics.*—Cold not regulated by latitudes—Prof. Maury—Disturnel—Statistics—The Gulf Stream and warm air from the Pacific—Hind's report—Gov. Stevens, Capt. Mullan, Disturnel, Carleton—The Isothermal Line, or the line marking the same mean annual temperature through America and Europe, as applied to Minnesota—Minnesota further south than the most populous European States—Article from the *London Financial Chronicle*—Humboldt's theory—Statistics of snow, rain, and frost in the State. Pages 72 to 85.

CHAPTER VII.

SCENERY—A CHAPTER FOR TOURISTS.—Official descriptions, by Owen, Hanchette, Clarke, and Long—Letters from Dr.

Boardman and "Carleton"—Prof. Maury—Lakes, cascades, falls, landscapes, mountain scenery—The jewelry of the State. Pages 85 to 91.

CHAPTER VIII.

MINNESOTA AS A FARMING COUNTRY.—Dr. Cheadle, an English writer, compares it with Canada and other Western States—Horace Greeley writes a letter about it—Compared with Illinois, Iowa, and Wisconsin, by Geo. B. Wright, U. S. Surveyor—Compared with Kansas, Nebraska, Iowa, and Illinois, by Carleton, of the *Boston Journal*—Also with the richest countries of the world—What the *Cincinnati Times* says—Crops raised, and the yield per acre—Statistics of all the States compared—Full evidence of our capacity to raise corn. *Stock Growing.*—Dairy business—Profitableness of farming—Testimony of Gen. Warren—Large farms: Paxton's, Dalrymple's, Davidson's, Marshall's, Thompson's—Profits of small farms, five or six examples—Cost and profit of raising wheat—Extra yields of wheat and other crops—Examples. Pages 91 to 114.

CHAPTER IX.

COMMERCIAL RESOURCES.—*Railroads, Rivers, and Markets.*—Pope's topographical report—Gen. Warren on the Fox and Wisconsin river improvement—Great saving in freight by this line and by the Lake Superior Railroad—Minnesota as near New York as Illinois—Wheelock's report—Anecdote of Professor Mitchell, showing the effect of railroads—Future commercial importance of Minnesota—Wm. H. Seward's prediction. *Vast Fertile Areas north-west of Minnesota, to the Pacific.*—Described by a committee of Congress, by Rawlings, Dr. Cheadle, and "Carleton"—The "Fertile Belt"—The track of a Pacific railway, described by English explorers—Glowing descriptions. *The Red River (Winnepeg) Settlement*, the seat of the rebellion—Its resources, people, and products—"Life at Winnepeg." *North Pacific Railroad* the shortest route—Its future business and effect on Minnesota—Thos. D'Arcy McGee, Rawlings, *Chicago Tribune*, and *Philadelphia Press* on the subject. *Present Condition of Minnesota Railroads.*—Projected roads and connections—Rivers and steamboat navigation—Growth of twenty-four years' business—Tonnage, business, and earnings of railroads—Trade and exports. Pages 114 to 137.

CHAPTER X.

MANUFACTURES AND WATER POWER.—Enumeration and description of water powers, and the raw materials—Geological authorities. *Slate*, *iron*, *copper*, *lumber*, *glass sand*, *granite*, *brown stone*, *tripoli*, *&c.*—Cost and profits of slate quarrying. *The Pineries.*—Their vast extent—Where located—"Will they fail"—"Life in the Pineries." Pages 137 to 150.

CHAPTER XI.

MINNESOTA AS A FRUIT COUNTRY.—Wild rice and cranberries—Vast areas and profits of culture—Indian mode of gathering wild rice—Where located—Other wild fruits—Cultivated fruits—Progress and success of apple culture—Varieties—Who have succeeded. Pages 150 to 157.

CHAPTER XII.

EDUCATION AND RELIGION.—Amount of school land and the school fund—Statistics of schools and school houses—Colleges, universities, normal schools, &c. *Churches.*—Number of each denomination, value, and membership—Missionary operations and religion on the frontier—Missions among the Indians. Pages 157 to 162.

CHAPTER XIII.

INDIANS.—Agencies and trading posts—Institutions, social customs, and amusements—Religious notions. Pages 162 to 168.

CHAPTER XIV.

SCENES ON THE FRONTIER.—Forty miles north of Ottertail Lake—A pioneer—A settlement go forty-five miles to celebrate the 4th of July—Chippewa Indians—A band of music—Snug farm and rural refinement—Woman's rights on the frontier—Farm of the "Seven Sisters," sixty miles west of St. Paul. Pages 168 to 173.

CHAPTER XV.

GOVERNMENT LAND.—How much still open to homestead entry, and the terms—Who can make a claim—The homestead

law—The pre-emption law—Half-breed scrip—*Where the Government lands are—Location of land offices, and address of the officers*—Amount of government land in each county—Best way to secure good claims—How and when the land is plowed, and the cost—When and how planted—No fever and ague—Prices and terms of buying land from individuals, railroad, or school lands—Average assessed value of all the land. Pages 173 to 179.

CHAPTER XVI.

Fish and game—Natural history—Botany—Number of lakes in the State—Varieties of fish—Lake Superior fisheries—Game—Varieties of birds—Plants and flowers. Pages 179 to 183.

CHAPTER XVII.

Banks—Insurance companies—Telegraphs—Stages—Benevolent Associations—State laws—Taxes—Public libraries—Rights of married women—Legal interest. Pages 183 to 187.

CHAPTER XVIII.

Cost of living—Prices current—Wages—A talk with farmers, mechanics, invalids, tourists, and immigrants generally—Cost of building—Building associations—Freights and fares—Cost of opening farms—Teams, utensils, and stock—The farm house—"Bees"—Winter work. Pages 187 to 192.

(*The following is added in the closing pages of the book.*)

PROGRESS OF THE STATE DURING 1869, AND UP TO JANUARY 1ST, 1870.—Miles of railroads built—Assessed property—Live stock—Correct area under cultivation of each crop—The gross yield, and the yield per acre in 1868 and 1869, in every county and in the State—Immigration of 1869—Concluding summary. Pages 275 to 289.

THE PRESS OF THE STATE.—Every paper, its politics or specialty, publishers, day of publication, and terms. Index to Advertisers.

PART SECOND.

THE COUNTIES.—Every County of the State in alphabetical order, and its towns, specially described as to population, nationality, soil, timber, prairie, meadow, lakes, streams, water power, area cultivated, products, prices of lands, fuel, lumber, numbers of live stock, increase of wealth and business, number of schools, school houses, and their value, children between five and twenty-one, churches, societies, number of stores, amount of business, number of lawyers, doctors and other professions and trades, amount of buildings and improvements, advantages and openings for business, number of mills, number and location of water powers, amount of school and railroad lands unsold, and the prices and terms, post offices, &c.

For fish, game, fruits, attractive scenery, government lands, &c., in each county, see the chapters in Part First on these topics.

MINNESOTA AS IT IS.

PART FIRST.—THE STATE.

CHAPTER I.

Area and Boundaries.—With the British line north, Red River and Dakota Territory west, Iowa south, and the Mississippi River and Lake Superior east as boundary lines, Minnesota has an area of 84,000 square miles, or 54,760,000 acres — larger than the six New England States, and nearly equal to Indiana and Illinois combined. It extends from north to south about 380 miles, and from its remotest point east to west about 350 miles —from lat. 43°30′ to 48° and 49°, and longitude 89°29′ to 97°12′.

General Surface of the Country.—All west of the Mississippi, except what is called the "Big Woods," generally rolling prairies and table lands of fertile soil, dotted with lakes, groves and belts of timber, the scenery reminding the traveller of one vast park; east of the Mississippi, and adjacent, and on the St. Croix south of 46°, a wide belt of agricultural lands, with extensive forests of pine beyond, on the northern tributaries of the Mississippi; and beyond these, north and northwest of

Lake Superior, broken highlands with narrow valleys and rich mineral lands.

The Big Woods is a belt of hard timber, 100 miles long by about 40 wide, extending south-westerly from Crow Wing to Rice and Blue Earth counties, interspersed with numerous prairies, lakes and natural meadows, and embracing the richest arable land in the Northwest.

ELEVATION ABOVE THE SEA.—Low water mark at St. Paul, 676 feet; bluff, Wabashaw Street, St. Paul, 790; Lake Superior, 600; Mississippi, above St. Anthony Falls, 786; mouth of Crow Wing, 1126; Sandy Lake, 1253; Pokegoma Falls, 1340; Cass Lake, 1400; Itasca Lake, 1532; hills adjacent, 1680; head of St. Louis River, 1750; Snake River, 75 miles from St. Paul, 1015; Kettle River, at Fortuna, 946; mouth of the Sioux Wood River, 963; Big Stone Lake, 968; Lac Qui Parle, 946; summit of the Coteau Des Prairies (west of Minnesota line,) 2046; low water at Mankato, 747; mouth of Minnesota River, at Fort Snelling, 680; Minnesota River, at Traverse des Sioux, 717; Blue Earth River, near Blue Earth City, 1114.*

Lowest Depression Continued Towards the Pacific.—The depression of the Minnesota Valley continues through the entire valley of Red River, whose elevation is 1000 feet above the sea—the average of Minnesota south of the highest summit; and is continued through the basin of the Sascatchewan north-westerly, exercising an important influence on the climate.

Height of Mississippi Bluffs.—From the plateau of Fort Snelling—786 feet above the sea—the banks of the Mississippi rise to an average height of 1100 feet above the sea, near the Iowa line, while the river declines about

* I. N. Nicollet, Railroad Surveys, and Gen. G. K. Warren's River Surveys.

six inches to the mile, giving a height above the sea at Red Wing of 995 feet at the summit of the bluff—650 feet at the water level; 1214 feet at the top of Eagle Bluff, near La Crescent—683 feet at the water level.*

Soil.—Described by geologists as of four varieties—limestone, drift, clay and trap. The limestone, according to Dr. Owen, occupying the western slope of the Mississippi for a breadth of 30 to 50 miles from St. Paul to the Iowa line, and parts of Ramsey and Washington counties on the east side, embracing an area of 5000 square miles; the drift occupying all that portion of the Mississippi and Minnesota valleys not included in the preceding division, embracing 38,000 square miles, and covering a subsoil of clay, marl, or gravel; the trap occupying districts in the St. Croix, Snake and Kettle River valleys, and on the north shore of Superior; the alluvial, argillaceous mould resting on clay subsoil occupying a large portion of the Red River Valley, which has an area of 17,000 square miles.

Analysis and Depth of Soils.—One to two feet deep on the slopes and ridges, two to four in the valley bottoms and "Big Woods." Owen, U. S. geologist, in an official report, 1851, gives the following analysis of the soil of the limestone district of the Lower Mississippi Valley:

Water	2.50
Organic matter	8.20
Silica acid	0.04
Carbonate of lime	0.80
Magnesia	0.32
Oxide of iron	2.68
Alumnia	4.04
Alkalies	0.08
Phosphates of lime and iron	0.01
Insoluble silicates	77.01
Inorganic acids, combined with above bases and loss	4.23
	100.00

* Nicollet and Warren.

He describes it as "usually of excellent quality, rich, as well in organic matter as in those mineral salts which give rapidity to the growth of plants and that durability which enables it to attain a long succession of crops."

A sample of the drift soil, taken from the Sauk Valley —an average specimen—was analysed by Dr. A. H. Hayes, assayer to the State of Massachusetts, who said "This was a dark-colored, fine-textured soil, abounding in organic matter, and highly fertile. One hundred parts in an air-dried state afforded—

Moisture	10.30
Humates, Crenates, &c.	6.00
Sulphate of lime	1.46
Carbonate of lime	4.60
Silicates	76.74
	99.10

"Of the organic part of this soil, six per cent. is composed of humates, crenates, and gelatinous compounds of lime. It is, in fact, a large amount of natural manures mixed with soil, and cannot fail to produce great and permanent fertility. It closely resembles the sugar cane soil of the West India islands."

Of the trap soils, most prevalent in north-eastern Minnesota, Hon. Thomas Clarke, Assistant State Geologist, 1861, in his official report, says "the granite, basalt, and trap boulder and fragment are geological specimens of our best soils. Analysis of various metamorphic rocks, as shown by De La Beche, give

7 per cent. potash in gneiss;

In talcose slate, 13 per cent. magnesia;

In mica slate, 14 per cent. oxide of iron.

"These alkalies and minerals in our soils illustrate that however much is due to climate for our prolific yields, no less is due to our soils, when chemically

considered. The soils exhibit the strongest varieties. Where sand predominates, the admixture of clay gives it substance. Where clay predominates, marl and iron oxide enter." See further descriptions of soil in descriptions of counties and sections.

TIMBER.—About one-third of the State is timbered land. Parker's book on Iowa estimates one-tenth of that State timber.

"*The Big Woods.*"—The principal body of hard wood timber is officially described by Col. J. J. Abert, Chief of Topographical Engineers, 1854, in a report to the War Department, as commencing "11 miles east of Mankato, extending 100 miles to the north and 40 to the east—the largest body of timber between the Missouri and Mississippi rivers — with almost every variety of deciduous timber, oak, ash, lime, walnut and maple the most abundant." Wheelock, Commissioner of Statistics, in an official report, 1860, to the Minnesota Legislature, says "It occupies 5000 square miles, 4000 of which are north of the Minnesota River, and 1000 south." He locates its southern bases in Rice, Blue Earth, Scott, and Le Sueur counties; its western line crossing the counties of McLeod and Meeker diagonally, through the middle; its eastern extending from the mouth of Rum River to Carver, on the Minnesota River; and the northern limit "commencing in the Crow Wing Valley, and forming a deep fringe of from 10 to 20 miles in width, along the western slope of the Mississippi to the Sauk Valley, at St. Cloud"—its longest side extending 100 miles south-westerly, and its average breadth being 40 miles.

Groves, Oak Openings, and Parks.—"Below lat. 46° a narrow range of cedar and tamarac swamps, between the St. Croix and Crow Wing rivers; and some pine,

mingled with large maple, oak, ash, and small birch and spruce, intervene for half a degree, when the oak becomes the prevailing tree on the uplands, distributed in groves and large parks. These oak openings characterize the whole delta of rolling prairie below lat. 45°, on the east side of the Mississippi. The soft maple, elm, ash, willow and alder line the bottoms of the Rum and Elk rivers."

Abert's official report of a topographical survey of a road through that part of the State west of the Mississippi, and south of the Minnesota (1854,) speaks of "rolling prairies, with timber generally near," "beautiful groves of oak relieving the monotonous appearance of the prairies," and "beautiful sheets of water, fringed with timber." He is supported in this description by the official reports of Nicollet of an expedition in 1838–9, and others, for which see descriptions of different sections of the State, "scenery," &c. We have only space to say generally of this feature of the whole State that "the number and beauty of its groves and belts of timber, which crown the undulations of the uplands or shadow the margins of the streams, break up the monotony of the prairie into forms of infinite variety and beauty, and unite all the elements not only of successful husbandry, but of delightful landscape in the limits of almost every farm."

Woods.—Besides the "Big Woods," there are no large forests of hard wood, except on the bottoms of the Minnesota and Mississippi rivers, the Zumbro and Root, and the St. Croix in Chisago county and northern part of Washington. The principal varieties are the sugar maple, oak, elm, ash, basswood, black and white walnut, lime, butternut, hickory, cottonwood, box wood, and linden.

The Pineries.—North of lat. 46° and east of Red Lake are the vast pineries of Minnesota, covering an area of 21,000 square miles, and varying in density from groves and scattering trees to dense forests. While pine is the prevailing timber, there is an intermingling of birch, maple, aspen, ash and elm—the alluvial bottoms of the Northern Mississippi and its tributaries supporting a heavy growth of basswood, elm, aspen, butternut, ash, birch, hard and soft maple, linden, balsam firs and oaks. Geologists, surveyors and others, who have explored the entire northern district, bear uniform testimony to the fact that wherever the prairie fires have destroyed the pine, the hard woods grow up in its place.

The most dense and valuable pineries extend from the eastern part of Pine County north-westward upon the headwaters of Kettle, Snake, Rum, Crow Wing, the Upper Mississippi, and Otter Tail rivers.

For more on this subject see "Manufactures," "Life in the Pineries," &c.

PRAIRIE DEFICIENT IN TIMBER.—While the whole of the State west of the Mississippi may be characterized generally as "prairie," the Upper Minnesota Valley, and portions of the south-western part of the State, and of the Red River Valley, are the most strictly prairie sections, where there is a scarcity of timber. Only on the margins of the lakes and streams is there anything like an abundance of timber; but there is no such deficiency as Mr. Parker, in his book on Iowa, attributes to that State. We state, on the authority of Gen. Bishop, U. S. Surveyor, that there is scarcely a breadth of 10 miles without timber. Parker says of Iowa, "Sometimes the prairies are from 20 to 40 miles in width, thus making timber inconvenient." To obviate this he says, "there is a vast amount of locust being cultivated. This grows

here with a rapidity seldom equalled elsewhere. I have seen trees at the age of ten years that would make eight posts of sufficient size for fencing." The same process has been adopted by many of the prairie farmers of Minnesota, who have groves of hard wood timber, the growth of a very few years, already sufficient to supply to a considerable extent their demands for rails and fuel, and to take the place of the natural timber when it shall have become scarcer with the increased population.

WATER, LAKES AND RIVERS. — Prof. M. F. Maury, formerly superintendent of the observatory at Washington, speaking of the vast number of our lakes, estimated by Schoolcraft as ten thousand in number, but probably more correctly estimated as from 1000 to 2000 in number, says: "There is in this territory a greater number of these lovely sheets of laughing water than in all the country besides. They give variety and beauty to the landscape; they soften the air and lend all their thousand charms and attractions to make this goodly land a lovely place of residence. * * * Minnesota is far from the sea, but it is a better watered country than either Kansas or Nebraska. Indeed, it may be considered the best watered State in the Union; and it doubtless owes its abundance of summer rains measurably to this lake system."

Size of Lakes.—They vary from 50 yards to 30 miles in diameter. A steamer navigates Lake Minnetonka now, and one was formerly used by the Government on one of the large lakes north of Crow Wing in transporting supplies to the Chippeways. Clarke, in his Geological report, estimates that in a body of 1,250,000 acres of land, between the St. Croix and Mississippi rivers, 73,000 acres are covered by small lakes; and Col. J. J. Abert's official report estimates that one-sixth of the

"Big Woods," or 825 square miles out of 5000 square miles, are covered with lakes, "some of them eight miles long, and deep enough to float a trigate." In south-west Minnesota, he speaks of large and beautiful sheets of water, 6 to 10 miles long, aud 1 to 5 broad, full of delicious fish, and bordered with timber. (See map.)

Purity and Beauty.—The most numerous class, from 1 to 3 miles in diameter, "are generally distinguished for their clear, white, sandy shores, set in gentle, grassy slopes, or rimmed with walls of rock, their pebbly beaches sparkling with cornelians and agates, while the oak grove or the denser wood which skirts its margin completes the graceful and picturesque outline."

The waters are generally pure, being supplied by springs, or living water. Nearly all abound in fish; but more of this under its appropriate head.

Rivers.—The Mississippi flows through Minnesota 797 miles, the Minnesota 334, Red River 379, St. Croix 129½, St. Louis about 135, and Root about 80. The Mississippi is navigable 534 miles, interrupted by St. Anthony Falls and Sauk Rapids; the Minnesota 238 miles, the Red River 379, the St. Croix 52¼, the St. Lonis 21, and the Root 24.

Besides these, among the larger rivers are the Crow, Rum, Blue Earth, Snake, Kettle, Crow Wing, Red Wood, Cottonwood, Sauk, Cannon, Zumbro, Le Sueur, Red Cedar, Red Lake, Des Moines, and many others, with innumerable tributaries, the whole spreading out over every section of the State, and bringing almost to the door of every farmer the priceless boon of living water for stock and water power for mills and manufactories.

NATURAL MEADOWS AND GRASS.—Among the many natural advantages of the State for agriculture and stock

growing, a most prominent and important one is the spontaneous growth of hay, without seeding or cultivation, in all parts of the State—used by the farmers instead of timothy, and relished well by horses and cattle, which thrive well on it.

Hon. Thomas Clarke, Assistant State Geologist, estimates over one million acres, distributed between the St. Croix and Mississippi, south of Sandy Lake, mostly natural meadows. Dr. Norwood, in Owen's report, says, "Some of these meadows are very extensive, and bear a luxuriant growth of grass often five or six feet in height. It is coarse but sweet, and is said to make an excellent hay." In the northern part of the State, he speaks of "extensive natural meadows bordering the lakes and streams, the luxuriant grasses of which are sweet and nutritious, and eagerly eaten by cattle." West of the Mississippi, Pope says he "made a march of nearly a thousand miles with heavy loaded wagons over a country heavy from continuous rains, and the wagon horses subsisted during the whole period upon the prairie grass." He speaks of a portion of the Elk River Valley as remarkable for its vast meadows of fine hay, from which it has derived the name of "The Big Meadows." Col. Abert's official report estimates one-sixth of the "Big Woods" as "wet meadows or marshes connecting with chains of lakes covered with very high grass, and affording fine pasturage for cattle, and making excellent hay—some too marshy for grazing, but easily drained." Long's official report to the War Department, in 1823, speaks of grass in the Minnesota Valley "growing to the height of six feet."

Carlton, correspondent of the *Boston Journal*, speaks of grass as high as a man on horseback, in the Red River Valley. Owen, Pope, Reno, Nicollet and

others, in official reports, testify to the same luxuriance and abundance of the natural meadows conveniently distributed in all parts of the State.

Fed by Living Water.—These meadows are not stagnant marshes, but generally are made by springs of clear water, and are drained by running brooks and rivulets of living water—thus combining the two grand essentials for stock raising—cheap and abundant grass and good water. These meadows are so luxuriant, that two crops are sometimes mowed the same season.

Cost of Saving: Yield per Acre.—Cost of saving by patent mower from $1.00 to $1.50 per ton. The State Auditor's official report shows 334,555 tons cut in 1868 on 133,564 acres. Average two and a half tons per acre.

SUMMARY OF NATURAL ADVANTAGES.—We have thus succinctly stated the natural resources of Minnesota necessary to her developement into a great agricultural country. In addition to these, when we add her inexhaustible raw material of iron, copper, slate, granite, clay, limestone, salt springs, pine lumber, glass sand, hard wood; water power for manufacturing purposes; rivers and lakes for commerce; forests and prairies alive with game; lakes and brooks full of fish; a climate singularly favorable for health and vigor of both man and beast, and for the successful culture of the cereals; natural fruits of delicious flavor; rice, as good as wheat and as palatable as that of the Carolinas, growing wild on thousands of acres; broad prairies and beautiful parks adorned with natural flowers and perfumed with their aroma, redolent with the songs of birds and refreshed by electric nightly showers that alternate with sunny days,—we need nothing more to convince us that the Creator fashioned this land with such a harmonious blending of all the elements of wealth

and happiness, not to remain the abode of the savage and a wilderness for the elk and buffalo, but the home of millions of men and women, who will yet develope into a great and prosperous State.

CHAPTER II.

POPULATION AND NATIONALITY.—In January, 1869, Gov. Marshall in his message says, the population is "reliably ascertained to be 445,000 from the school census and election returns," the vote in November amounting to 71,868, and the school census showing 129,103 between the ages of five and twenty-one.

Nationality.—The 445,000 are classified by careful estimates from every county, as German, 80,000; Irish, 60,000; Swedes and Norwegians, 60,000; French, 7,000; Bohemians, 3500; Welsh, 3000; over 200,000 American, and the balance English, Scotch, Canadians, not classified, and a sprinkling of Poles, Swiss, and every variety. The Swedes and Norwegians are mostly located in the river counties south of St. Paul, the southern counties, Chisago, Washington, Nicollet, and the new counties on the northwest frontier; the Irish and Germans in Dakota, Ramsey, Scott, Le Sueur, Goodhue, Hennepin, Wabasha, Wright, Waseca, Rice, Winona, and Houston; the Germans in Carver, Brown, Blue Earth and Nicollet; the Welsh in Blue Earth; French, mostly in Ramsey and Dakota; Bohemians, in Le Sueur and Rice.

Nationality by Census, 1860.—Population, 172,022. Born in the United States, 112,227; Germany, 17,289; Ire-

land, 12,869 ; Norway and Sweden, 11,692 ; British America, 8156 ; England, 3406 ; Scotland, 1119 ; France, 907 ; balance from almost every civilized nation, the whole speaking sixteen different languages. (See Wheelock's Report.) Every State in the Union was represented ; 3437 from the Southern States. From Wales there were 448 ; Austrian Empire, 654 ; Denmark, 190 ; Belgium, 91 ; Holland, 419 ; Italy, 56 ; Poland, 103 ; Russia, 35 ; Switzerland, 1150 ; Spain, 1 ; Mexico, 3 ; West Indies, 2 ; East Indies, 5 ; Africa, 1, &c. Of mixed Indian blood, 2545 ; Blacks and Mulattoes, 143.

Nativities of American Population.—Minnesota, 32,682 ; New York, 21,720 ; Pennsylvania, 7574 ; Ohio, 7506 ; Wisconsin, 6695 ; Maine, 6554 ; Illinois, 5440 ; Vermont, 4268 ; Massachusetts, 3771 ; Indiana, 3649 ; New Hampshire, 2422 ; Iowa, 1708 ; Michigan, 1836 ; Connecticut, 1681 ; New Jersey, 811 ; Rhode Island, 420 ; Kansas, 25 ; Border Slave States, 2863 ; Southern Slave States, 574 ; California, 11, &c.

Growth in Population.—Organized as a Territory in 1849, with 4057 population ; having by the census of 1850, 5330 population ; admitted as a State in 1858 with 152,000 ; having by the census of 1860, 172,022 ; by census of 1865, 250,099 ; she had in January, 1869, by estimate of Gov. Marshall, based on reliable data, 445,000.

Comparison with other States.—" Michigan, Indiana and Illinois were each from 20 to 28 years in reaching the population obtained by Minnesota in ten," viz., from 1850 to 1860.

Increase of	Wisconsin,	from 1860 to 1865,	93,064, or 11.9 per cent.
"	Minnesota,	" 1860 to 1865,	78,077, or 45.3 "
"	Wisconsin,	" 1860 to 1865 (5 yrs.)	93,064, or 11.9 per cent.
"	Minnesota,	" 1865 to 1868 (3½ yrs.)	194,011, or 77.9 "

Considering that Wisconsin in 1860 had 775,873 population, and Minnesota in 1865 had only 250,099—less

than one-third that of Wisconsin, the 194,011 increase in Minnesota, in 3½ years, compared to 93,064 in Wisconsin, in 5 years, shows the very remarkably rapid growth of Minnesota.

Compared with the prosperous State of Iowa, her great pre-eminence still holds.

Increase of Iowa, from 1860 to 1865, 78,553, or 11.16 per cent.
" Minnesota, " 1860 to 1865, 78,077, or 45. 3 "
" Iowa, " 1860 to 1865 (5 yrs.) 78,553, or 11.16 per cent.
" Minnesota, " 1865 to 1868 (3½ yrs.) 194,011, or 77.9 "
Population of Iowa in 1860, 674,948.
Population of Minnesota in 1865, 250,099.

With less than a third of the capacity of Wisconsin for natural increase by births, and a little over a third of the capacity of Iowa, *Minnesota shows a per centage of increase in three years and a half seven times as great as these States in five years*, and an *actual increase* in numbers, *in three and a half years, two and a half* times that of these States in *five years*.

And yet the *American Reporter*, an immigration paper published at New York, reviewing the progress of the Western States from 1860 to 1865, and placing Minnesota in the front rank, says, "most of them took a census in the years 1864 and 1865, and the results of these censusses establish the astonishing fact that the increase of these States from 1860 to 1865 has been, in spite of the war, more rapid than that of the most flourishing States of Europe."

Europe Challenged to Show a Parallel Increase.—The same paper then gives the following exhibit:

States.	Census of 1860.	Census of 1865.	Per cent. increase.
Minnesota.....	172,022 ..	248,848* ..	40.†
Illinois.....	1,711,951 ..	2,163,000 ..	27.
Wisconsin.....	775,871 ..	868,847 ..	12.
Iowa.....	674,948 ..	753,501 ..	11.16
Michigan.....	749,113 ..	805,479‡ ..	7.05

* Should be 250,099. † Should be 45.3. ‡ 1864.

The average annual increase of Minnesota is 9 per cent., Illinois 5.4 per cent., Wisconsin 2.4 per cent., Iowa 2.2 per cent., Michigan 1.9 per cent. The article then proceeds to state that they have not room to review the messages of the governors, which "unroll a picture of satisfactory progress, but takes one of the Governor of Minnesota as a specimen." After stating our financial condition, number of acres of land entered, logs scaled, amount of school funds, railroads in process of completion, &c., as given in ex-Gov. Miller's last message, the *Reporter* adds: "Now we may safely challenge Europe to show us any State equalling these statistics. And let our friends in Great Britain always bear in mind the above figures show the development of this State during a war, the like the world has rarely seen, and which, in the opinion of famous statesmen and financiers of Europe, was infallibly to terminate in the dissolution of the Union, and the utter prostration and bankruptcy of the dissolved parts."

INCREASE OF WEALTH.—VALUATION OF REAL AND PERSONAL ESTATE.

Year.	Year.	Year.
1849— $514,936	1856-$24,394,395	1863-$32,211,324
1850— 806,437	1857—49,336,673	1864—41,222,264
1851— 1,282,123	1858—41,846,778	1865—45,127,318
1852— 1,715,835	1859—35,564,992	1866—57,974,352
1853— 2,701,437	1860—36,753,408	1867—65,140,248
1854— 3,508,518	1861—39,981,513	1868—75,795,366
1855—10,424,157	1862—29,832,719	

INCREASE OF LIVE STOCK.

Horses	1850— 860	1862—29,742	1865—49,575
	1860—16,879	1863—34,749	1866—59,328
	1861—21,168	1864—41,901	1867—76,317
			1868—83,709
Cattle ..	1850— 1,347	1862—180,482	1865—186,259
	1860— 88,729	1863—194,736	1866—183,910
	1861—127,777	1864—196,448	1867—219,336
			1868—235,426

Sheep	1850— 80	1862—43,552	1865—147,512
	1860—12,595	1863—63,624	1866—171,053
	1861—22,455	1864—92,612	1867—173,604
			1868—146,598
Hogs ...	1850— 734	1862—117,237	1865— 67,589
	1860—104,479	1863— 87,857	1866— 84,436
	1861— 93,083	1864— 71,483	1867—108,004
			1868— 91,468
Mules and Asses	1850—14	1860—384	1865—664
Value of Live Stock	1850— $92,859		1865— $5,967,812
	1860—$3,201,769		1868—$10,707,872

CHAPTER III.

OFFICIAL DESCRIPTIONS OF THE BEAUTY AND FERTILITY OF THE STATE.

—*Eastern Minnesota south of* 48°, embracing the counties of Houston, Fillmore, Winona, Olmsted, Dodge, Wabasha, Goodhue, Rice, Dakota, and half of Washington and Ramsey. "The land best adapted for wheat and most small grains, and in which the proportion of earthy, saline, and organic matter is distributed in the best proportion to impart fertility and durability, is the soil based on the calcareous and magnesio-calcareous rocks, and which particularly characterizes the country bordering on the Mississippi and its tributaries between the 41st and 45th degrees of latitude, with an average width of twenty to thirty miles west of the Mississippi. It includes on the west side of the Mississippi the country watered by the Des Moines, the two Iowas, Yellow, Root, Minneiska, Wasioja, Cannon, and Vermillion."*

* Owen's Geological Report (1851.)

Col. J. J. Abert, chief of topographical engineers, in a report to the War Department, April, 1854, says of a large portion of these counties: "Vermillion Prairie, a most fertile and beautiful region, beginning twelve miles from the Minnesota River, and extending to the Mississippi on the east, and to Iowa on the south, has a surface gently undulating and a rich soil. Occasional beautiful groves of oak relieve its otherwise monotonous appearance and afford charming sites for residences."

Mr. Wheelock (official report) says of Houston, Fillmore, Mower, Freeborn, Winona, Olmsted, Wabasha, Dodge, Goodhue, Rice, Dakota and a part of Le Sueur counties: "The soil of the valley bottoms is alluvial, very deep, and astonishingly fertile. Upon the slopes, ridges and prairies where it is derived from the magnesian limestone which it overlays, it is scarcely less so." Plenty of timber "along the valleys and ravines," "sparse on the uplands and wide prairies," and large tracts in the Zumbro Valley, Dodge and Wabasha counties, the Root River Valley and in Rice County.

"The Cannon and Vermillion rivers (in Rice and Dakota counties) flow through smooth, wide prairies almost to their very mouths. The courses of the Zumbro, Minneiska and Root rivers are marked as they approach their outlets by deep sinuous ravines, cut through the series of sedimentary rocks, whose castellated summits, towering above the intervening valleys, seem like huge Titans guarding the sleeping beauty beneath." "All the streams run over pebbly bottoms, and in their rapid descent break into numerous waterfalls, while their pure waters, replenished by innumerable springs, are stocked with fine trout."

EASTERN MINNESOTA, NORTH OF THE ST. CROIX AND SOUTH OF ST. LOUIS RIVERS, embracing Carleton, Aiken, Pine,

Chisago, Kanabec, Isanti, Mille Lacs, Anoka, Sherburne, Benton, Morrisson, Crow Wing, and north half of Ramsey and Washington.

Hon. Thomas Clarke, Assistant State Geologist (official report, 1861,) says: "The granite, basalt and trap boulder and fragment are geological specimens of our best soils. Two-thirds of my field of observations, the triangle between the St. Croix and Mississippi, south of St. Louis and Prairie rivers, consists of the above soils. The remaining third, in areas of 100 to 1000 acres, is swamp land." Of this he estimates 250,000 acres of cranberry marsh, 74,000 acres of wild rice, 735,000 tamarac marsh, 73,000 small lakes, and 122,000 sandy barrens with little timber. The finest natural meadows abound in this district.

Mr. Wheelock speaks of the country bordering on the St. Croix, below 46°, as "heavily timbered with hard woods and of a rich soil," "its lower sections presenting a succession of oak openings of great beauty and fertility." The valleys of the Snake and Kettle rivers occupied mainly by swamps and natural meadows, bearing a luxuriant growth of grass five or six feet in height, which makes a coarse, sweet hay of great use in the pineries."

He speaks of the Mississippi Valley above Elk River and below the pineries (latitude 46°) as "of excellent soil—prairies interspersed with beautiful parks of oak;" the valleys of the Rum, Elk, Platte and other streams which rise in the highlands and lakes of the great summit level and cross the pineries, as a "low undulating plain, covered with clusters of lakes, tamarac swamps, meadows and oak openings, with a thin sandy soil on the highest ridges, and intervening masses of great fertility in all the slopes and depressions;" the prevailing characteristic

below 46° being rolling prairies with oak openings, soil sandy, but rich in organic ingredients.

Facility for Drainage of the Swamp Lands.—Clarke, geologist, in his official report, says "the elevation of the main or dividing ridge between the St. Croix and Mississippi is known to be from 100 to 200 feet greater than those rivers at their approximate points. Hence ample fall exists for the thorough drainage of these lands."

Subsoil of the Marshes.—"The subsoil of these lands is the same as the uplands, sand, clay, and marl. The surface is vegetable mould and fibrous roots—nearly a peat in some localities—covered with moss, grass, and ferns, and varies from one to three feet in depth."

The Pineries are the most valuable of the resources of this district, of which see more under head of "Timber," "Manufactures," &c.

THE MINNESOTA VALLEY AND SOUTH-WESTERN MINNESOTA embrace the counties of Scott, Sibley, Nicollet, Carver, Le Sueur, Blue Earth, Waseca, Faribault, Martin, Brown, Watonwan, Cottonwood, Redwood, Renville, Chippewa, Lac Qui Parle, Big Stone, and parts of Hennepin and Dakota.

Owen, in his geological report, describes the Minnesota Valley thus: "With the exception of the Bois Franc District (Big Woods) the whole country may be considered as prairie, the streams only being skirted with wood. * * * Throughout the greater part of the St. Peter [Minnesota] River country the traveller is surprised and charmed with the ever changing variety and beauty of the scenery.

"The alluvial land bordering upon the river varies in width from a quarter of a mile to a mile or more. The greater portion of this constitutes numerous natural

meadows, covered annually with a large, luxuriant growth of grass. * * * A remarkable feature of this country consists in the small lakes and ponds scattered over it. Many of these are beautiful sheets of water, having the appearance of artificial basins, which greatly enhance the beauty of the country, especially when skirted by groves of trees, as they sometimes are, and frequented by a variety of water fowls." In another place he says, "on fairly entering the Valley of the Minnesota River, we again find a fertile, well-watered, and desirable farming country."

Exceedingly Fine View.—Again: "About ten miles above the Rapids (Little Rapids) two beautiful terraces of fertile prairie rise above the river bottom. The summit of the first bench is elevated one hundred and thirty feet above the river, and extends for several miles up and down the river, with a width of about three quarters of a mile, dotted with occasional groves of oak, maple, and elm trees. The second terrace rises one hundred feet higher, or two hundred and thirty feet above the river, and is composed of coarser materials. The view from these heights is exceedingly fine, and the disposition of prairie and groves of timber almost conveys the idea of a cultivated country."

Jonathan Carver, an English traveller, in a book published in 1781, describes the Minnesota Valley as "a most delightful country, abounding with all the necessaries of life, that grow spontaneously." He speaks of "trees bending under the loads of fruits, meadows covered with hops and many sorts of vegetables, the ground stored with useful roots, and eminences a little distance from the river, from which you have views that cannot be excelled, even by the most beautiful of those I have already described."

G. W. Featherstonhaugh, another English traveller, in 1835, in his "report of a geological reconnoisance," speaks of this valley as "extremely beautiful—charming slopes, with pretty dells intersecting them, studded with trees as gracefully as if they had been planted with the most refined taste."

I. N. Nicollet, a scientific explorer, in his official report to the War Department, of his expedition of 1838–9, says: "Among the regions (adjoining the Coteau des Prairies) which appear to me the most favorable, is the one watered by the Mankato or Blue Earth River, and to which I have given the name of the 'Undine Region.'" This appears to comprise the counties of Faribault, Martin, Blue Earth, Waseca, Watonwan, and parts of Brown and Cottonwood.

He continues: "The great number of the navigable tributaries of the Mankato, spreading themselves out in the shape of a fan; the groups of lakes surrounded by well-wooded hills; some wide-spreading prairies, with a fertile soil; others, apparently less favored, but open to improvement; the whole together bestow upon this region a most picturesque appearance. The whole country embraced by the Lower St. Peter (Minnesota River) and the Undine Region exceeds any land on the Mississippi above the Wisconsin River, as well in the quality and quantity of its timber as the fertility of its soil."

Timber.—"The forests of the Valley on the right bank are connected by groves and small wooded streams of the adjoining prairies, with the forest called Bois Francs (Big Woods)." He gives the varieties as "soft maple, American and red elm, black walnut, the nettle tree, basswood, and red and white ash."

The Undergrowth.—The common hawthorn, prickly ash, high cranberry, red root, dogwood, fox grape, horse

brier, and moonseed. Among the herbs are the wild and bristly sarsaparilla, Indian turnip, the gay orchis, and others; rushes and the flowering ferns are abundant along the low banks of the rivers.

The Prairies are very luxuriant, and somewhat level and depressed; the gum plant and button snake root are the most abundant and conspicuous herbs. Red and burr oak, with hazel, red root, peterswort, and the wild rose, are the trees and shrubs of the uplands; also thickets of poplar and birch on the elevated prairies near the river.

The Valley Prairies are rich in pasture grasses, leguminous and orchideous plants, such as the yellow ladies' slipper, American and tufted vetch, and others. The lowest parts near the border of the wood, and those subject to inundation, are filled with the high weeds common to such places—as the ragged cup, tall thistle, great bitterwood, the tuberous sunflower, and others. Swamps are frequent, and some of them contain extensive tracts of tamarac pines. Cedars grow, intermixed with red birch, on the rocky declivities of the lower Mankato (Blue Earth) River.

WESTERN MINNESOTA, AND THE VIEW FROM THE COTEAU DES PRAIRIES.—Though the Coteau, as now understood, is outside the limits of Minnesota, except where it cuts slightly the south-western corner, the region described by Mr. Nicollet as the Coteau seems to have embraced, on its eastern slope, nearly all the western counties of Minnesota south of the Minnesota River. He says, for instance: "I pitched my tents during three days about the groups of Shetek or Pelican lakes, that occupy a portion of the space forming the plateau of the Coteau des Prairies." He speaks of "fine lakes that would furnish on their borders eligible sites for such villages as were formerly occupied by some of the Dakota tribes,

1400163

previous to the war of extermination waged against them by the Sac and Fox Indians," instancing the names of Shetek, Benton, and Spirit lakes. These lakes he locates within the Coteau, and they are all in Minnesota except Spirit, which is on the southern line.

The Coteau des Prairies.—Mr. Nicollet describes the Coteau "as a vast plain, elevated 1916 feet above the level of the ocean* and 890 feet above Big Stone Lake, lying between latitude 43° and 46°—200 miles long, running north-west and south-east, and 15 to 20 miles wide in latitude 46°, and 40 wide below latitude 44°." He describes it as "a beautiful country"—says "from its summit grand views are afforded," that "at the eastern border particularly the prospect is magnificent beyond description, extending over the immense green turf that forms the basin of the Red River of the North, the forest-capped summits of the *hautuers des terres* that surround the sources of the Mississippi, the granitic valley of the Upper St. Peter's, and the depressions in which are Lake Traverse and Big Stone Lake. *There can be no doubt that in future times this region will be the summer resort of the wealthy of the land.*" He describes the northern extremity as "a most beautiful tract of land, diversified by hills, dales, woodland, and lakes;" and says, "other portions of the Coteau, ascending from the lower latitudes, present pretty much the same character, with the remarkable difference that the woodlands become scarcer and the open prairies more extensive."

Botany.—He mentions, "among the interesting specimens of the vegetation of this region, as trees, the American and red elm, lime tree, burr oak, white ash, ash-leafed maple, nettle tree, large American aspen; as shrubs, the

* This is at its northern extremity. On its western slope, 60 miles north-east of Fort Pierre, he makes it 2096 feet.

hazel, red root, peterswort, &c.; as herbs, alum root, tufted and American vetch, wood sorrel, sedge and pasture grasses, Canadian cinquefoil, the germander, Southern lilly, button snake root, Virginia strawberry, buffalo clover, pink milk vetch on arid slopes, mustard and dwarf amaranths on sandbrakes, and the silver-leafed psoralia (Indian turnip)."

WESTERN MINNESOTA, SOUTH OF THE MINNESOTA RIVER, embracing the counties of Redwood, Cottonwood, Jackson, Nobles, Rock, Murray, and Pipestone. A part of the high compliment paid by Mr. Nicollet in the above extracts to the "Coteau," seems to have been designed for this section of Minnesota. For he locates the eastern boundary of the Coteau among the sources of the Blue Earth River, and says, "among the regions of country *adjoining the Coteau des Prairies*, that which appeared to me the most favorable is the one watered by the Blue Earth River,"—which he calls "the Undine Region."

Gen. J. W. Bishop, of Minnesota, who traversed this country in 1866 as U. S. Surveyor, says of that part of it "embracing the sources of the Redwood, Yellow Medicine, Cottonwood and Des Moines rivers," "in all our perambulations, we have found the *soil* every where, except on the Coteau, of the best quality, adapted to the raising of wheat or any other crop that can be grown in the settled portions of the State." The Coteau, he says, crosses the State boundary near the corner of townships 110 and 111, ranges 46 and 47, and takes in the land west of Lake Benton, which is hilly and gravelly.

Stock Raising.—He says "no finer stock country is found or needed anywhere. A grove of timber and a few acres enclosed for garden purposes and for grain enough for home consumption is easily acquired. The stock may range over the prairie, hardly needing any attention from

May to November. While for the winter, hay costs only the cutting and stacking."

Timber.—"The Redwood River is fringed with timber the most of its course." He speaks of the Cottonwood River as fringed with timber also; says some of the streams emptying into the Cottonwood have "deep valleys, filled with fine timber;" that some of the lakes have fine groves of timber, particularly Bear Lake, which has several hundred acres of timber nearly surrounded by water.

Lakes, Fish and Game.—He speaks of "fine lakes of clear water with clean, handsome beaches, plentifully stocked with fish and fowl,"—the streams also; and "the elk and buffalo are often met as far east as Lake Shetek."

North-western Minnesota, embracing Hennepin, Wright, Stearns, McLeod, Meeker, Kandiyohi, Monongalia, Lincoln, Todd, Douglas, Pope, Stevens, Otter Tail, Grant, Wilkin, Carver, Nicollet, Sibley, Renville, Chippewa, Traverse, Lac Qui Parle, Big Stone, and other counties. In 1849, Capt. John Pope, topographical engineer, was commissioned by the United States to explore North-western Minnesota. From his official report, we extract the following highly flattering tributes to its great fertility and beauty.

What Pope Explored.—"The country which I have in part traversed during the past summer, embraces about one-third of the Territory of Minnesota, and lies to the north and east of the St. Peter's (Minnesota) River, and to the north and west of the Mississippi, including within its borders about 60,000 square miles."

His idea of it in brief.—"I have traversed this territory from north to south, a distance of 500 miles, and with the exception of a few swamps, I have not seen one acre of unproductive land." Again: "The examination of a portion of this territory during the past summer, has

convinced me that nature has been even more lavish in her gifts of soil, than in her channels of communication, and has still left to the enterprise and industry of man to complete what she has so well begun."

Its Navigable Waters.—"When it is known that the Mississippi is navigable for at least 400 miles of its course within this territory (north of St. Paul,) the Red River of the North nearly an equal distance, the St. Peter (Minnesota,) with an improvement at one point only, for 120 miles, and the Jaques River through nearly three degrees of latitude, it becomes a matter of vast interest to the world to ascertain the capacities for agriculture and manufactures of a country so bountifully supplied by nature with outlets for its productions."

Its Lakes, Soil and Timber.—"Notwithstanding the immense number of lakes laid down upon the maps, they are even more numerous than they are represented, but are surrounded by a gently undulating country of the most fertile soil, and abundantly supplied by nature with all the forest trees common to so northern a latitude."

WEST OF THE MISSISSIPPI, NORTH OF THE MINNESOTA AND SOUTH OF THE RED RIVER.—*His idea of it in brief.*—"I am at a loss to express myself with sufficient force to do justice to the beautiful country embraced within this division, which is perhaps the most remarkable in the world for its peculiar conformation and vast productiveness."

Again.—"From its great fertility, fine water power, and the facilities for immediate and rapid communication with the Mississippi aud St. Peter's (Minnesota,) I regard this division as being by far the most valuable portion of Minnesota."

Again.—"I know of no country on earth where so many advantages are presented to the farmer and manufacturer."

The Garden Spot of the Northwest.—Again, speaking of Ottertail Lake, he says: "The whole region of country for fifty miles in all directions around this lake, is among the most beautiful and fertile in the world. The fine scenery of lakes and open groves of oak timber, of winding streams connecting them, and beautifully rolling country on all sides, renders this portion of Minnesota the garden spot of the Northwest. It is impossible in a report of this character, to describe the feelings of admiration and astonishment with which we first beheld the charming country in the vicinity of this lake; and were I to give expression to my own feelings and opinions in reference to it, I fear they would be considered the ravings of a visionary or an enthusiast."

North-western Minnesota.—Carlton, of the *Boston Journal*, who was with the Pacific Railroad Exploring Party in July, 1869, speaks thus of parts of Clay and Becker counties and the valley of the Buffalo River,—40 miles north of Otter Tail Lake.

"How exhilarating to gallop over the pathless expanse, amid a sea of flowers, plunging now and then through grass so high that horse and rider are almost submerged. The meadow lark greets us with his cheerful song; the plover hovers around us with quivering wings; sand hill cranes, flying always in pairs, rise from the ground and wing their way beyond the reach of harm. The gopher chatters like a child amid the flowers. * * *

"The buffalo are gone. The ox and cow are coming to take their place. Sheep and horses will soon fatten on the rich pasturage of these hills. We of the East would hardly call them hills, much less mountains, the slopes are so gentle and the altitudes so low. The highest grade of a railroad would not exceed thirty feet to the mile in crossing them.

"Here we find granite and limestone boulders, and in some places beds of gravel—brought, so the geologists inform us, from the far North, and deposited here when the primeval ocean currents set southward over this then submerged region. They are in the right place for the railroad. The stone will be needed for abutments to bridges, and the gravel will be wanted for ballast; provided the road is located in this vicinity.

"On our second day's march we came to a section of country that might with propriety be called the Park Region of Minnesota. It lies amid the highlands of the divide. It is more beautiful than even the country around White Bear Lake, and in the vicinity of Glenwood. Throughout the day we ride amid such rural scenery as can only be found amid the most lovely spots in England.

"Think of an undulating country, rounded hills, with green slopes—of lawns and parks and countless lakes—calm waters reposing amid the hills, skirted by forests, fringed with rushes, perfumed by the lilies; or of the waves rippling on graveled beaches; of wild geese, ducks, loons, pelicans and innumerable water fowl building their nests amid the reeds and rushes; think of lawns as blooming with flowers, of elk and deer browsing amid the meadows. This is their haunt. We see their tracks along the sandy beaches, but they keep beyond the range of our rifles.

"So wonderfully has nature adorned this section, that it seems as if we were riding through a country that has been long under cultivation, and that behind yonder hillock we shall find an old castle, or at least a farm house, as we find them in Great Britain.

"I do not forget that I am seeing Minnesota at its best season, that it is midsummer, that the winters are as

long as in New England; but I can say without reservation that nowhere in the wide world, not even in England, the most finished of all lands; not in *la belle France*, or sunny Italy, or in the valley of the Ganges, or the Yanktze, or on the slopes of the Sierra Nevada, have I beheld anything approaching this region in natural beauty.

"How it would look in winter I cannot say, bnt the members of our party are unanimous in their praises of this park region of Minnesota. The land is unsurveyed, and the nearest pioneer is forty miles distant, but land so inviting will soon be snapped up by settlers."

Country between Sauk Rapids and White Bear Lake.—Pope says: "In the whole section of country between the Mississippi and Lightning Lakes," (which he locates 14 miles east of White Bear, in Pope County, 75 miles west from Sauk Rapids) "the surface is gently undulating, the soil exceedingly fertile, and the timber most abundant."

He speaks of the "rich, black soil of the prairies, the numerous lakes of pure, clear water, skirted with timber, and full of fish and wild fowl, the abundance of timber all along the route, and the high grass rendering the route almost imperceptible."

THE BIG WOODS.—*Soil, Timber, Lakes, Meadows, &c.*—Covering 4000 square miles of this district, is probably the finest body of land in the Northwest—described by Col. Abert, topographical engineer, in his official report (1854) as "the largest body of timber between the Mississippi and Missouri rivers, with every variety of deciduous timber, with numerous beautiful lakes abounding in fish of the most delicious flavor," having "beautiful gravelly beaches," covering about one-sixth of the area, another sixth covered with "wet meadows with very high grass, affording fine pasturage and excellent hay," while the balance is gently undulating and densely timbered,

with a soil of inexhaustible fertility and offering the best locations for farms of any country we saw along the route.

Interspersed with Prairies.—O. E. Garrison, U. S. Surveyor, says: "this tract of country is of course not all heavy timber, but has numerous prairies interspersed throughout its whole extent of the richest arable land to be found in Minnesota."

The Soil is described by the U. S. Statistical Gazetteer as "of great fertility and unusual depth, covered as it is with the mold of a thousand years."

THE RED RIVER COUNTRY.—*Its Extent.*—Pope says: "The Valley of the Red River of the North is about 300 miles in length from north to south, and 150 in breadth from east to west, and is bounded on the west by the dividing ridge of the Coteau des Prairies, and on the east by a line from the head of Red River through to the most north-eastern point of Red Lake"—an empire within itself.

His idea of it in brief.—"In this whole extent it presents an almost unbroken level of rich prairie, intersected at right angles by all the heavily-timbered tributaries of the Red River, from the east and west—the Red River itself running nearly due north through its centre, and heavily timbered on both banks with elm, oak, ash, maple, &c., &c. This valley, from its vast extent, perfect uniformity of surface, richness of soil, and the unlimited supply of wood and water, is among the finest wheat countries in the world."

Again.—He says: "The prairie country, between the several crossings of the Red River and the Rush River, is high, level, and *astonishingly* fertile; that Sheyenne River is navigable for barges 150 miles; that Mr. Nicollet, a scientific explorer, visited its upper valley,

and was enthusiastic in his description of it; that the whole region between the Sheyenne and Sioux Wood rivers is the most remarkable country I have ever seen for its singular uniformity of surface, the wonderful fertility of its soil, its peculiar fitness for the production of all kinds of grain, and the great healthfulness of its climate;" and that "*the whole Valley of the Red River is of the same character;*" that "in the summer it is covered with the most luxuriant growth of prairie grass, and all the varieties of wild flowers; and even uninhabited as it is, it *presents the appearance of a vast cultivated garden.*"

"*As a grazing country*, it is remarkably fine, as may be easily understood, from the fact that the expedition of the past summer made a march of nearly a thousand miles, with heavy, loaded wagons, over a country without roads and heavy from continued rains, and the wagon horses subsisted during the whole period upon the prairie grass."

Red River Valley described by Owen.—David Dale Owen, U. S. Geologist, in his official survey of Iowa, Wisconsin, and Minnesota, in 1851, says of the Red River Valley: "The general agricultural character of the Red River country is excellent; the land highly productive, especially in small grain." He speaks of "sloping prairies extending down to the edge of the river, crested with beautifully disposed groves of timber," "picturesque landscapes," and "rural beauty." He says "the air along Red River, from the mouth of the Psihu up to thə settlements (latitude 47° to 49°,) is scented, during the months of June and July, with a delightful perfume arising from the wild roses, which form a thick shrubbery along its banks."

The Buffalo (*N. Y.*) *Commercial* says "the Valley of

the Red River of the North equals that of the Nile for the production of wheat of the finest quality."

Described by Capt. Joseph Anderson, of the Monnted Rangers, who has navigated the Red River, farmed its lands, and travelled over the valley from Fort Garry to Breckinridge time and again.

Surface of the Country.—On either side from fifteen to twenty miles level prairie, with fine dry land; meadows yielding from one to three tons of hay per acre—very little swamp land.

Soil.—From two to ten feet deep, a rich vegetable loam, underlaid by a stiff clay.

Timber.—A belt from a half mile to one mile wide, equally divided on each side of the Red River from Graham's Point, two miles south of Abercrombie to Pembina; tall heavy oak (not scrub,) hackberry, ash, basswood and large elm, with an undergrowth of iron wood, plum and hazel—no maple.

On Buffalo River, a belt of timber a quarter of a mile wide by fifteen long, a similar belt on Wild Rice River (Minnesota side) and a heavier body on Red Lake River the whole length. On the Sheyenne River (Dakota side) heavy timber for fifty miles, from a quarter to one mile wide.

Cottonwood for Lumber.—From the mouth of Wild Rice, on the Minnesota side, is a fine growth of heavy cottonwood, suitable for lumber.

Pine for Lumber.—A fine body of elegant pine timber in the northern part of Ottertail County, enough to supply the Red River Valley for a long time if economically used.

Navigation.—Red River, navigable nearly all summer for good sized boats to Goose River Rapids, north of Georgetown. Small boats can run two months of nearly every season to Abercrombie or to Breckinridge. Some

snags need clearing from Graham's Point to the Rapids, making navigation troublesome, but not dangerous. Flat boats can navigate as far up as Lapham, three miles from Dayton. Red Lake River is also navigable with flat boats.

SOUTHERN MINNESOTA, embracing Houston, Winona, Olmsted, Dodge, Fillmore, Mower, Freeborn, Steele, Faribault, Martin and Jackson counties. Col. Abert, Chief of Topographical Engineers, describes the western part as "rolling prairie with timber generally near, soil rich, and offering many inducements to the emigrant, particularly in the vicinity of the Okamanpidan and Omanhu lakes, and the Des Moines and Chaniuskah rivers." "The Mankato (Blue Earth) and its numerous tributaries being generally well timbered and flowing through a country unsurpassed in the salubrity of its climate and the productiveness of its soil, offers great attractions to the enterprising farmer." See also Nicollet's descriptions of the "Undine Region," on page 33. See Owen's and Wheelock's flattering descriptions of Eastern Minnesota, as to the eastern part.

NORTHERN MINNESOTA, embracing Lake, St. Louis, Itasca, Cass, and Wadena counties, parts of Beltrami and east half of Pembina, described by geologists, voyageurs and government officials, as generally unsuitable for farming purposes, but abounding in valuable minerals, extensive forests of pine and hardwood, natural meadows, and immense fields of wild rice.

Mr. Wheelock, sustained by Owen's report and other authorities, estimates 3000 square miles on the north shore of Lake Superior, and 2000 square miles scattered through the pineries, as an exception to the general sterility of the district. There are also belts of excellent land aronnd most of the larger lakes. The east part of

Pembina between Lake of the Woods and Red Lake, is represented as an impassable swamp.

It is called the Highland or Mountain District of the State—its summit, 1680 feet above the sea, being the "watershed" or dividing ridge between the waters flowing south to the Gulf of Mexico, and those flowing north to Hudson's Bay. The hills north of Lake Superior are estimated by Owen to rise 1200 to 1300 feet above the lake and less than 2000 above tide water.

Agricultural Character of the Western Division.—This includes an area of 16,440 square miles lying west of St. Louis and Carlton counties, and including east half of Pembina. Dr. A. Barnard, resident surgeon at the Chippewa Agency, in a letter contributed to this book, describes the

Surface of the Country.—He says: "Down the southern slope (of the dividing ridge above described) the land stretches away in easy undulations and level sandy plains, occasionally, in the vicinity of lakes and streams, rising into low hills and bluffs. The northern slope, towards Red Lake and the Rainy Lake River, is less easy, and the surface more broken. Voyageurs state that the canoe route down the Big Fork of this river is obstructed at one point by falls of fifteen feet descent, and that in its whole course the current is more rapid than that of the Upper Mississippi."

Soil.—"Generally sandy and second rate, but exceedingly fertile belts around the lakes."

"*Timber* grows over the entire district. On that portion drained by the Mississippi pine is the principal growth. Of this there are three species: the black (called also the bastard or spruce pine,) Norway, and white pine. The former is most abundant, and of least value for lumber. Sugar maple, elm, bass, ash, oak, and

birch skirt most of the large bodies of water." Tamarac in the swamps, and north of Sandy Lake white cedar and spruce mingled with the tamarac.

Roads, &c.—"From Crow Wing village, following the north bank of the Crow Wing River, by the Old Agency to the Crossing, 33 miles. Thence to Otter Tail Lake; mail weekly. From Crow Wing village, by Gull Lake and Pine River, to New Agency, on south shore of Leech Lake, 70 miles; mail weekly. From north shore of Leech, by west side of Cass, crossing the dividing ridge near Turtle Lake, to south shore of Red Lake, 75 miles."

Another Account.—Rev. John Mattocks, of St. Paul, who went from Crow Wing to Red Lake, via the basin of Leech Lake, in 1868, by government appointment, on Indian business, says of the "chances of settlement" in this region, "about the same as in the Adirondacks of New York. Occasionally you meet with a mingled growth of pine and maple, where a few farms might be opened; but these spots will be ten or fifteen miles apart, and the intermediate country is sterile and inhospitable —a thin surface resting on a cold, impervious subsoil of indurated clay, and covered with low scrubby pine. Marshy lakes spread in all directions."

The whole of Cass County formerly Covered with Water. —"The whole area of Cass County, fully equal to Connecticut, is a plateau which, at a period comparatively recent, has been denuded of water, probably by a sudden rupture at Pokegoma Falls, and the land cannot be said to be settled. A dam at Pokegoma twenty feet high would flood the whole country again."

At Red Lake, "a good country."

Another Account.—Mr. Wheelock's official report, which estimates 2000 square miles of this district as suitable for agriculture, says: "The soil of all the

valleys on the southern slope of the watershed (dividing ridge above described) is lacustrine;" "a great deal of it rich lacustrine alluvial deposits; the bottoms deeply alluvial;" "the sandy soils of the uplands highly impregnated with lime, and when the calcareous clay which underlies it approaches the surface, it forms a strong, rich soil."

Natural Drainage going on.—He notes the observation of Norwood, that the whole district including the summit level and the southern slope is undergoing a process of drainage, and so rapidly that a large addition to the tillable land of the State may be calculated upon at no distant period. The observation of Mr. Mattocks, given above, corroborates this theory.

Sources of the Mississippi.—Mr. Nicollet explored the creek which empties into Itasca Lake, and says: "Its head waters unite at a small distance from the hills whence they originate, and form a small lake, from which the Mississippi flows with a breadth of a foot and a half and a depth of one foot." It passes through two other lakes, and gathers other tributaries, until it finally empties into Lake Itasca 15 to 20 feet wide and 2 to 3 feet deep, issuing from the lake 16 feet wide, 14 inches deep, beautifully transparent, with a swift current; after an hour's descent, the breadth of the stream enlarges to 25 feet and its depth to 3 feet.

The Summit Level of the Mississippi around its Sources.—At Pemidgi Lake he says: "So far the Mississippi has received the contributions of ten rivers; its wide and flattened bed, completely covered by water, presents a lake (or rather pool) from forty to fifty miles square, clogged up with aquatic plants, with intermediate spaces of clear water, looking like channels; but among which it is difficult to discover the true course of the river, for

at certain seasons of the year the whole is nothing more than a marshy prairie."

Wheelock speaks of it as an "interminable labyrinth of streams and rice lakes, meadows, ponds, bogs, and cranberry swamps."

THE EASTERN OR SUPERIOR DISTRICT OF NORTHERN MINNESOTA, embracing Lake and St. Louis counties, north of Lake Superior, is the mineral district, where iron, copper, slate quarries, gold and silver ore are the most valuable resources.

Surface of the Country, Scenery, Timber, &c.—General Views.—Owen says: "Relatively, the high ranges and chains of hills which begin in Canada and cross into Minnesota, north of Lake Superior, may be termed mountains, although they only rise to the height of between 1200 and 1300 feet above the lake at the highest points, and less than 2000 feet above tide water. The valleys between these mountain ridges are often from 5 to 600 feet below the summits, and vary in width from one or two miles to narrow gorges not over 200 or 300 yards across. * * * In the trap region, rugged mountain scenery prevails; in the schistose and granitic belt, occasional knolls or low ridges, with intervening lakes or swamps, make up the scene; and in the drift region, lines of conical hills, irregular depressions and low ridges, with long slopes, constitute the main features of the country. The rivers have numerous falls and cascades, and in the small deep valleys often expand into beautiful lakes, the clear waters of which appear almost black under the dark shadows of the high rocky walls which enclose them." * * * "All the hills, ridges and valleys of the north shore with the exceptions already named, are densely timbered. Among the trees are white cedar, birch, spruce, fir, pine, aspen,

maple, elm, ash and basswood, with a dense undergrowth.

Agricultural Character: Pineries, &c.—Aug. H. Hanchette, State Geologist, 1864, in his official report, says: "The soil of the district is well adapted to the cultivation of wheat of the best quality, oats, rye, barley, the esculent roots, grasses, and most serviceable garden vegetables."

Timber.—"Mainly of a valuable kind and specially adapted to mining purposes. White and Norway pines, spruce, birch, sugar maple, basswood and ash, from the coast back to the dividing ridge."

St. Louis River Valley. — Clarke, geologist, says: "Extensive forests of pine and cedar prevail in the valleys of the St. Louis and tributaries; between the lake and Upper Falls, the valley is timbered with sugar maple, lime, birch and poplar, and the land is generally of the best quality." Owen says: "From its mouth to a distance of eighteen miles, the river runs through a rich alluvial bottom, from one to three miles in width, partly timbered and partly covered with natural meadows." He says the timber for the whole distance to Upper Embarrass, consists principally of aspen, poplar, fir, spruce, pine, ash, and some hard maple of small growth." Above East Savannah, "hills generally come up to the river on one side, while soft maple and elm bottoms are spread out on the other." Land, thin soil and mostly poor.

Cascades: Scenery: Fine Supply of Water for Mining and Manufacturing.—Hanchette says: "There are few if any mining districts in the United States as well supplied with water as the north shore of Lake Superior within the limits of this State. There are forty-three rivers and creeks, the volume of water in the least of which is sufficient if properly appropriated to wash fifty ton of stamped rock per day.

"The majority of these streams have their sources in lakes and low lands away beyond the ranges, and running nearly parallel with each other, cut down through them and find their way to the great lake over rippling cascades or frowning precipices magnificently high. It is safe to estimate the water power of the district in every way adequate to all the wants prospective of mining or manufacturing enterprise."

The most Inviting Farming Region on the North Shore.—"The entire valley of the Wisacode River is well adapted for a settlement of farmers; a dozen or twenty pioneers, with their families, would find it one of the most inviting fields for settlement on the north shore. * * * The breadth of the valley is generally about one mile; the soil is rich, alluvious, free from swamps, timbered in sections 15, 16, 21, 22, 27, and 28 with black and blue ash, elm, yellow birch, white pine, balsam spruce, white cedar, and tamarac, and in sections 3, 4, 9, and 10 sugar maple is added, all of good size. One tamarac was measured, and found to be *ten* feet in circumference; the pines, cedars, and spruces are also of the largest size and best qualities; the shrubbery consists of high bush cranberry, white thorn, dwarf maple, red plum, and large-sized hazel; also raspberry, gooseberry, and black and red currant.

Its Waterfalls.—"About the middle of section 27 a creek comes into the Wisacode from the north-west, the valley of which is similar to that of the river. A quarter of a mile above the mouth of this creek is one of the most symmetrical waterfalls met with in this region—just such scenery as the school girl in her first attempts at painting would delight to sketch; the creek above glides gently over a bed of basaltic trap to the verge of an escarpement," &c., &c.

The Rainy Lake River Valley, described by Sir George Simpson as "favorable to agriculture;" as "a gentle slope of greensward, crowned in many places with a plentiful growth of birch, poplar, beech, elm, and oak," resembling the banks of the Thames in fertility, and the river navigable for a hundred miles.

CHAPTER IV.

CLIMATE.—*Official Descriptions in Brief, and Testimonials of Distinguished Men.*—Col. J. J. Abert, chief of topographical engineers, writes officially to the War Department in 1854: "The healthfulness of the climate, and the productiveness of the soil of Minnesota, are not surpassed by the most favored regions of our country. * * * The cold is not so intense, nor the climate so changeable, as that of Massachusetts. * * * During the summer the heat is ample in intensity and duration to perfect all the cereal grains, and the long snows of winter protect the wheat from the freezing out so common to the valley of the Ohio."

Dr. David Dale Owen's official report, 1851, of a geological survey of Minnesota and the Northwest, gives the approximate mean, at noon, of the two warmest months of the summer of 1849 on Lake Superior, near lat. 47°, as 68°3′ and 64°5′, and says "this indicates a moderate and delightful climate." He gives on page 469 an

Abstract of the Three Coldest Months in 1844–5–6.

MONTHLY MEANS.

Dec., 1844.....	Sunrise	20°93′	9 A.M.	22°45′	3 P.M.	25°09′	9 P.M.	22°20′
Jan., 1845.....	"	19°96′	"	21°70′	"	23°61′	"	20°32′
Feb., 1845.....	"	20°96′	"	23°03′	"	28°	"	22°82′
Dec., 1845.....	"	16°38′	"	19°06′	"	20°12′	"	18°16′
Jan., 1846.....	"	23°29′	"	25°03′	"	28°74′	"	24°54′
Feb., 1846.....	"	16°35′	"	18°53′	"	23°32′	"	18°17′

Lowest point in Dec., 1844, 6° above zero. In Jan. and Feb., 1845, zero.
" " " 1845, 4° below zero. In Jan., 1846, 2°, and in Feb. 9° below.

After giving the observations of the army surgeons at Fort Wilkins, taken from the reports of the Surgeon-General at Washington—for three winters, he says, they "show a much more moderate winter than would be anticipated in lat. 47½° north. * * * Residents suffer little from cold, owing to the uniformity of the temperature."

Pope's official report to the War Department, 1850, says: "But a very small portion of Minnesota is north of the rich wheat regions of Canada; and facts go to prove that Canada is neither too cold for the cultivation of grain, nor for the comfort of the inhabitants."

"The coldness of the climate will be no great objection to that class of persons emigrating to Minnesota from New England."

Col. Charles Whittlesey, of Cleveland, Ohio, who made a geological exploration of the mineral regions of Minnesota in 1848, 1859 and 1864, in his report printed by the Legislature of Minnesota, says:

"Observations upon temperature, which have been kept at Superior, at the west end of Lake Superior, for more than ten years, show that the climate around this part of the lake is much milder than it is further east. The snow is less deep, and the climate better adapted to agriculture. This is in accordance with a well established principle of meteorology, that proceeding westward on lines of latitute the climate becomes milder."

Right Rev. Thomas L. Grace, of the Catholic Church, Bishop of St. Paul, in a letter contributed to this book, Feb. 25th, 1869, says: "From my experience during a residence of nearly ten years in Minnesota, I can confidently testify to the very remarkable salubrity of the climate, at all seasons of the year. Though the winters are long, the prevailing temperature is moderate. Intervals of severe cold weather occur occasionally, but they are not usually of longer continuance than three or four days at a time. The dry, bracing air of Minnesota is pleasant compared with the damp, raw atmosphere that characterizes the winters of more southerly States. The agricultured advantages of the State are deservedly regarded as among the very best."

Rev. Dr. Horace Bushnell, of Hartford, Conn. (whose letter relating his cure of consumption by our climate, see under "Healthfulness of the Climate,") closes his letter as follows: "The peculiar benefit of the climate appears to be from its dryness. There is as much, or even a little more of rain there than elsewhere in the summer months, but it comes more generally in the night, and the days that follow brighten out in a fresh, tonic brilliancy, as dry almost as before. The winter climate is intensely cold, and yet so dry and clear and still, for the most part, as to create no very great suffering. One who is properly dressed finds the climate much more agreeable than the amphibious, half-fluid, half-solid, sloppy, grave-like chill of the East. The snows are light—a kind of snow-dew, that makes about an inch, or sometimes three in a night. Real snow storms are rare; there was none last winter. A little more snow to make better sleighing would be an improvement. As to rain in winter, it is almost unknown. There was not a drop of it last winter, from the latter part of October to the middle or about the

middle of March, except a slight drizzle on Thanksgiving Day. And there was not melting snow enough for more than eight or ten days, to wet a deer skin moccasin, which many of the gentlemen wear all winter."

Rev. Dr. F. T. Brown, of St. Paul, on the 17th January, 1868, wrote to the *Philadelphia Presbyterian*:—"Your many thousands of readers—at least some of them—would, I think, be interested in an account of the late "cold term" here—the coldest in St. Paul for many years. Last Sunday and Monday, thermometers in different localities in the city, indicated 40°, 44°, and (in one place reported to me, that I have not verified) 48° below zero.

"During the week previous, the electrical phenomena were marked and striking. Parhelia, or mock-suns, or as they call them here, 'sun dogs,' were to be seen every day; and some days followed the sun from his rising to his setting; being particularly brilliant at sunrise and sunset. And at night there were 'moon dogs.'

"The morning displays far exceeded anything I had imagined of these things. * * *

"In one form or another these magneto-electrical displays continued through the week, the cold daily getting more and more intense. Sunday morning the mercury was down to 40°, 44°, and possibly 48° below zero. The sky was without a cloud; not a breath of air was stirring, and the stillness and perfect quiet of everything was that of a Sabbath in summer. I went to my study as usual, and felt no unusual sensation of cold. In fact, the exhilaration of being out in, and breathing the air, was purely delightful. My Sabbath school met at nine o'clock, and was attended as usual. Quite small children were present, who had come two miles. My own children were all out, though one of them is but five years old, and none

were suffering from the cold. The church services, morning and evening, were attended much as usual. In short, the intense cold seemed to trouble no one. In the evening I had occasion to walk two miles to see a sick man, and suffered no inconvenience from the cold. Monday morning the cold was the same as Sunday morning, but toward evening moderated, and that night it snowed.

"I speak of these things because I could not have understood them before experiencing them, and could scarcely have believed them possible. Both Sunday and Monday I was out and about, just as on other days; and though clothed precisely as I was in New York last winter, (with the exception of fur cap and gloves,) when the coldest weather was 5° *above* zero, I have not suffered at all from the cold here, as I often did there. I have in my congregation men and women who removed here from Maryland, Virginia, Kentucky and Mississippi, and they all enthusiastically declare that it does not *seem* so cold here as it often did in the States whence they came. I can now understand Dr. Kane's statement, that he could, without inconvenience, stand 70° below zero, if no wind were blowing. And fortunately, here the coldest days are the stillest days."

Rev. Dr. H. A. Boardman, of Philadelphia, having been sojourning at St. Paul for his health, wrote to the *Philadelphia North American and Gazette*, October 21st, 1868. After speaking of the absence of rains in winter, the rarity of thaws, and the uniformity of the atmosphere, he says:—

"This ensures a dry and comparatively equable atmosphere—the two qualities most congenial to weak lungs. It is the uniform testimony of the residents that they suffer less from the cold than they did formerly in the wet and variable winters of lower latitudes."

CHAPTER V.

OFFICIAL AND OTHER TESTIMONY TO THE HEALTHFULNESS OF THE CLIMATE.—A CHAPTER FOR INVALIDS OF ALL KINDS.—Pope, Topographical Engineer's Official Report, (1850,) says: "The climate is far more healthy than that of the wheat regions of Illinois and Iowa."

Col. J. J. Abert, Topographical Engineer's Official Report, (1854,) says: "The healthfulness of the climate, and productiveness of the soil of Minnesota, are not surpassed by the most favored regions of our country."

David Dale Owen, U. S. Geologist's Official Report, 1851, says:

"At the Pembina settlement, owned by the Hudson's Bay Company, to a population of five thousand, there was but a single physician; and he told me, that, without an additional salary allowed him by the company, the diseases of the settlement would not afford him a living. The health even of the more marshy portions of the district seems better than from its appearance one might expect. The long bracing winters of these northern latitudes exclude many of the diseases, which under the prolonged heat of a more southern climate, the miasm of the swamp engenders."

Dr. Chas. A. Leas, U. S. Consul at Madeira, in a published letter dated Sept. 10th, 1866, says: "Nearly eight years ago I entered the foreign service of the government, was consul in Northern Russia, Sweden, Central America, and now here, and though I do not now practice medicine, yet I have made the subject of climate, as a curative agent in consumption, a special study; and in connection with my annual report to the State Department at Washington—just now sent on— * * I have endeavored to show, from observations, that consumption, in its earlier

stages, is best relieved by a visit to a residence of greater or less extent in high northern latitudes, instead of warm climates, as is the usual custom. I have further suggested Minnesota as one of the finest climates for that purpose."

In his report to the State Department, he speaks of the superior purity of the air "in high northern latitudes, such as Russia, and the north-western portions of the United States, east of the Rocky Mountains," and indicates the atmosphere suitable for consumptives. He then says: "For such an atmosphere as is here indicated, I would suggest to invalids affected with pulmonary diseases that they are most likely to find it in Minnesota. The time, however, for such to seek relief in cold or warm climates is when their disease is in the first or fore part of the second stage."

Surgeon G. K. Wood, U. S. Army, speaking of the advantages of a northern over a southern climate in cases of consumption, says: "Although in the north the winters are extremely cold, a stimulant and tonic effect is the only result of exposure in the open air." He speaks of "the present injudicious course of sending consumptives to the hot, low, and moist coast, and the islands of the Gulf of Mexico," and says it "should be abandoned." "In diseases of debility the remedies are tonics and stimulants. What is more debilitating than affections of the lungs? and what less tonic than heat and moisture combined, as is found in the climate of the Gulf Coast? It is simply not cold, and has no other advantage over the northern States."

Disturnel on the "Influence of Climate in North and South America," says: "The great health-restoring region of the United States, embracing the Upper Peninsula of Michigan, Northern Wisconsin, Minnesota,

Dakota, and Montana, east of the Rocky Mountains, lies between the 44th and 49th parallels of latitude. * * Over this immense prairie region * * there seems to be a healthy influence prevailing throughout the entire year—particularly in regard to the absence of cases of consumption and malignant fevers. * * *Minnesota may be said to excel any portion of the Union in a healthy and invigorating climate.*"

He quotes authority for the statement that "In North America the diseases of the respiratory organs, of which consumption is chief, have their maximum in New England, in latitude about 42°, and diminish in all directions from this point inland. The diminution is quite as rapid westward as southward, and a large district near the 40th parallel is quite uniform, at 12 to 15 per cent. of deaths from consumption, while Massachusetts varies from 20 to 25. At the borders of the dry climate of the plains, *in Minnesota, a minimum is attained* as low as that occurring in Florida, and *not exceeding* 5 *per cent.* of the entire mortality." * * "Invalids suffering from pulmonary complaints and throat disease, are almost uniformly benefitted by the climate of the above northern region having a mean annual temperature of 40° to 50°."

Prof. R. T. Trall, M. D., founder of the New York Hygeio-Therapeutic College, says: "The clear, dry, bracing atmosphere and invigorating climate of Minnesota have long enjoyed a world-wide reputation, especially in cases of incipient consumption, confirmed dyspepsia, bronchial and rheumatic affections, and have been extensively resorted to by invalids from the Eastern States and Europe. And it is well known, that invalids can bear without discomfort, in a dry atmosphere, a temperature of 30° to 40° below the disagreeable point of the damp and chilly atmosphere of the Atlantic Coast."

Horace Greeley spoke at the Minnesota Agricultural Fair in 1865. He writes of Minnesota, in a contribution to this book:

"I knew that many had gone to her for health; I rejoiced to perceive that most of them had found it. In quiet homes, as well as at the Fair, I found every one strong, elastic, active, vigorous, buoyant." (*See letter elsewhere in full.*)

THE EXPERIENCE OF INVALIDS CURED.— *Who should and who should not go.— When to go and when not.*

Rev. Dr. Horace Bushnell, of Hartford, Conn., in a published letter, says:—

"I went to Minnesota early in July, and remained there till the latter part of the May following. I had spent a winter in Cuba, without benefit. I had spent also nearly a year in California, making a gain in the dry season and a partial loss in the wet season; returning, however, sufficiently improved to resume my labors. Breaking down again from this only partial recovery, I made the experiment now of Minnesota; and submitting myself on returning, to a very rigid examination by a physician who did not know at all what verdict had been passed by other physiclans before, he said, in accordance with their opinions, 'You have had a difficulty in your right lung, but it is healed.' I had suspected from my symptoms, that it might be so, and the fact appears to be confirmed by the further fact, that I have been slowly, though regularly, gaining all summer.

"This improvement, or partial recovery, I attribute to the climate of Minnesota. But not to this alone—other things have concurred. First, I had a naturally firm, enduring constitution, which had only given way under excessive burdens of labor, and had no vestige of hereditary disease upon it. Secondly, I had all my burdens thrown off and a state of complete uncaring rest. Thirdly, I was in such vigor as to be out in the open air, on horseback and otherwise, a good part of the time. It does not follow by any means, that one who is dying of hereditary consumption, or one who is too far gone to have any powers of endurance, or spring of recuperative energy left, will be recovered in the same way. A great many such go there to die,

and some to be partially recovered, and then die; for I knew two young men so far recovered as to think themselves well, or nearly so, who by over-violent exertion brought on a recurrence of bleeding and died; one of them almost immediately, and the other in about twenty-four hours—both in the same week. The general opinion seemed to be, that the result was attributable, in part, to the over tonic property of the atmosphere. And I have known of very many remarkable cases of recovery there, which had seemed to be hopeless. One, of a gentleman who was carried there on a litter, and became a hearty, robust man. Another, who told me that he coughed up bits of his lungs of the size of a walnut, was then, seven or eight months after, a perfectly sound-looking, well-set man, with no cough at all. I fell in with somebody every few days, who had come there and been restored; and with multitudes of others, whose disease had been arrested so as to allow the prosecution of business, and whose lease of life, as they had no doubt, was much lengthened by their migration to that region of the country. Of course it will be understood that a great many are sadly disappointed in going thither, and that as the number of consumptives making the trial increases, the funerals of the consumptive strangers are becoming sadly frequent."

For the concluding part of this letter, see testimonials under the preceding head.

Rev. H. A. Boardman, D. D., of Philadelphia, who tried Minnesota for his health, wrote to the *Philadelphia North American*, October 21st, 1868, a letter from which we extract the following:

But I must come to my subject. I should not have troubled you with this letter were it not that the question is so often asked, "How far is St. Paul to be recommended as a resort for invalids?" If one may judge from indications on the spot, invalids themselves have settled this question. I have never visited a town where one encounters so many persons that bear the impress of delicate health, present or past. In the stores and shops, on the street and by the fireside, it is an every-day experience to meet with residents who came to Minnesota one, two, five or ten years ago for their health, and having regained

it, decided to remain. I have talked with some who, having recovered, went away, twice over, and then made up their minds that to live at all they must live here. The common mistake with consumptives is that they defer coming until it is too late. Every train brings its quota of invalids, and among them there are apt to be some whom no skill but that of the Great Physician could relieve. Far better if they had stayed at home to "die among their kindred." But on the other hand, there are witnesses here by the hundred to testify to the healing virtue of this climate in the incipient stages of pulmonary disease. Let one example stand for many. Last evening I met a gentleman who gave me this narration: "In April last, my young daughter, 13 years of age, had a severe hemorrhage. She grew thin and pale, and was evidently hastening to the grave. My physician said, 'Take her to Minnesota.' I brought her here and rented a small house in the suburbs of Minneapolis, (at the Falls of St. Anthony,) and left her in charge of her nurse, with instructions to ride out every day, except in the rain. I find her now with four inches added to her height and thirty pounds to her weight; the pain in her chest entirely gone, and no shred of disease left except a slight hoarseness."

Such examples are by no means unusual. There is an excellent physician, known to me formerly in Philadelphia as a medical student, who came here a few years since, after having several hemorrhages. The fatal process was arrested, and he is now well, and living here in the practice of his profession. It may be safely said that these instances are the rule, not the exception. What perplexes the uninitiated is that invalids can bear these severe winters. Severe they must be, for after the winter sets in it never rains, never thaws, and the mercury often dropping down to twenty and thirty degrees below zero, never rises above the freezing point. This insures a dry and comparatively equable atmosphere—the two qualities most congenial to weak lungs. It is the uniform testimony of the residents that they suffer less from the cold than they did formerly in the wet and variable winters of lower latitudes. * * * And this helps to explain why their winters are at once healthful and comfortable.

The result, as shown by the official returns, is sufficiently remarkable. It appears that the mortality of St. Paul for 1867

was 1.30 per cent., or about four deaths to every three hundred inhabitants. As these statistics include strangers and sojourners, as well as residents, they illustrate the singular salubrity of the climate more forcibly than any other class of facts.

It is pleasant to be able to add that the society of St. Paul is cultivated and refined, and its people eminently hospitable. These are graces which tourists, and still more invalids, know how to appreciate. * * * On the whole, Minnesota fairly deserves the reputation it has acquired as a grand sanitarium. It will not cure all diseases; diseases of the heart and some others are accelerated here. It will not always arrest pulmonary affections. But consumptive and bronchial patients coming here in time will ordinarily find great relief, and in no inconsiderable proportion of cases they will, by God's blessing, be restored to health.

From Sweetzer's Guide to the Northwest.—Two Letters for Invalids.—Fishing and Hunting.—Who should and who should not come.—Extract from a letter dated St. Paul, Minn., Dec. 24, 1865:

It is not the object of your correspondent to court any argument upon the relative merits of a northern or southern climate for the cure of that fell destroyer of human life and happiness —consumption, but merely to give his experience as an invalid during a sojourn of several months in a country which is fast becoming one of the most popular resorts for invalids from all parts of the Union. Neither do I wish to be understood as claiming for Minnesota entire immunity from disease, nor that the climate is a sovereign remedy for all cases of consumption; but, from careful observation, I believe I am justified in asserting that there is no locality on this continent so exempt from "all the ills that flesh is heir to" as this. The dryness of the atmosphere, the peculiar character of the soil, the almost total absence of fogs and moist winds, all contribute to render the climate one of unrivalled salubrity.

In its first stages, consumption appears to yield readily to the peculiar influence of the climate; and, even in the more advanced stages of the disease, the patient, by a continued residence in this country, finds permanent relief and comparative good health. I find that three classes of cases arrive in

this country in search of relief: 1. Those slightly affected, who take time by the forelock, get well in a few months, and return to their homes perfectly cured. 2. Those more seriously affected, who never fully recover the use of their lungs, but by a permanent residence in Minnesota enjoy comparative good health. 3. Those who wait until it is too late, and arrive here only to linger a few weeks and die among strangers.

It is to be regretted that the majority of the invalids who arrive here are not of the first class. Unfortunately, owing to the ignorance of physicians, the disease is seldom detected in its first stages; and it is not until a hemorrhage takes place, or tubercles commence to soften, that they see the necessity for the removal of the patient to a more salubrious climate.

The second, or predominating class, are scattered all over the entire State, from the Iowa line to the shores of Lake Superior. Go where you will through Minnesota, and you will meet persons apparently in good health, who could not exist two years under the influence of the cold, moist winds of the Atlantic States. Many of them arrive here quite low, but, with the help of a good constitution and the peculiar salubrity of the climate, they manage to rally, and enjoy tolerably good health. In one or two instances which came under my observation, the patients had to be removed from the steamboat in a carriage, and several months elapsed before any visible improvement could be noted; but finally the patients commenced to mend, and the clear, bracing atmosphere of winter soon restored them to health. A few Sundays ago we buried one of the oldest residents of this city, who had been ill with consumption for fifteen years. He had been sick with the disease three years when he entered the State, and did not expect to live many months; but he rallied, and by a continued residence in the country, managed to prolong his existence a dozen years. Some of the leading business men of this city, men noted for their enterprise and success in life, belong to the second class, and, although to all appearance in the full possession of health, tell you that it would be impossible for them to exist East.

Of the third class not much need be said. They never ought to come here, as the fatigue and excitement of the journey only tend to hasten death. Some die on their way up the river, some at the hotels and boarding-houses before they have been

domiciled among us a fortnight, and others, feeling that death is inevitable, start for home before they have been a week in the country.

A very intelligent gentleman from New York, whose acquaintance I made when I first arrived in St. Paul, estimated that about three out of every ten persons who came here afflicted with lung complaints recovered so as to be able to return to their homes, and that over fifty per cent. of the invalids were afforded permanent relief. My informant, who is an invalid himself, has spent three years in the State, and, although in the enjoyment of apparent good health, says he will never be able to live in his native place again. He has therefore sent East for his family, and intends going into business here.

It would be a difficult task to arrive at anything like the approximate number of invalids in the State, for there are no statistics on the subject, but it is safe to estimate them by thousands. In the summer you find them scattered all over the State, amusing themselves by fishing and hunting. The attractions in this respect are superior to anything of the kind in the United States perhaps. The entire surface of the State is dotted with lakes, varying in circumference from one mile to one hundred, which abound in the largest and choicest kind of fish. Pickerel, weighing from twelve to fifteen pounds, bass, wall-eyed pike, and trout in proportion, are caught in large quantities in all lakes and rivulets. Trolling on the lakes is especially recommended by the physicians as the most fitting exercise for invalids who are too reduced to follow the more fatiguing sport of gunning. In the fall of the year, which is certainly a delightful season, the woods abound with deer, partridges, and quail, while the stubble fields furnish the Nimrod with all the prairie chickens he can carry in an ordinary sized wagon. Geese and ducks of the finest flavor frequent the lakes in immense flocks, and afford splendid sport. Occasionally you stumble upon a bear, but invalids are not very partial to Bruin as a general thing, and usually allow him to follow the bent of his inclination unmolested.

The cost of living in this far off Western country is by no means as expensive as some would imagine. Board at the best hotels in St. Paul can be procured cheaper than at the East,

and in the country towns one can live very comfortably for about five or six dollars a week. As winter sets in, the invalids all flock to the towns, where they can spend the season more agreeably than they can in the country. Such places as St. Paul, Minneapolis, St. Anthony, St. Cloud, Faribault, and Winona are crowded with them, and the citizens derive no little profit by the presence of such visitors. The pineries, which extend along the St. Croix River, and run as far north as Lake Superior, are much frequented by consumptives. A belief is prevalent here that the pine emits an odor which is peculiarly healing, and highly beneficial for invalids; hence it is no uncommon thing for small parties to take up their quarters in the wilderness, and spend the winter there with the numerous gangs of lumbermen engaged in felling trees and hauling logs to the banks of the neighboring creeks, with the view of floating them down the St. Croix in the spring. Those who have the strength and courage to endure this wild mode of life, generally experience the most beneficial effects, and in the spring are enabled to return fat and hearty.

A gentleman who has tried the virtues of the Minnesota air, writes as follows to the *New Orleans Picayune*.

I stand to-day, after the rigors of a Minnesota winter, following a Minnesota summer, a well man. Of course I am grateful for the benefits received, and ought to be willing to communicate my experience for the benefit of those similarly situated. Hundreds come here annually from the far South, with the thousands from all parts of the continent, for their health. Of these hundreds, many are entirely cured of lung and liver diseases, and invigorated in their worn-out systems by a few months' stay. Others come too late. Their lives are usually prolonged by the change, but the grim monster has secured too firm a hold upon them. They die among strangers, bereft of many of home's endearments, and far away from the friends they love. To point out who should and who should not come to Minnesota, will be the object of this article.

The first of May, or as soon thereafter as possible, is the better time to start. The whole river is then one moving panorama of beauty, refreshing to the eye and to the heart. As the pale

invalid proceeds northward, his blood thrills with new sensations of vigor, caused by the change of air. His appetite increases. His weight and strength increase. He plows on and on, up the constantly varying stream, past scenes new and wonderful, all serving to excite his interest, and entice him to constant open-air life in the luxurious, glorious abandon of steamboat traveling, at pleasant seasons of the year. As he nears his destination, and sees the limpid clearness of the now diminutive Father of Waters, he feels as though he was approaching the fabled Fountain of Youth, where with one bath he may wash age, and wrinkles, and diseases away.

He reaches Minnesota. He secures quarters at a hotel or country house, on some of the thousand lovely lakes or rivers, and spends the summer fishing, hunting, wandering through the forests or over the prairie. His mind is withdrawn from books and business. His body is free from conventional restraints. His habits are regular. He sleeps long and soundly; he eats voraciously; he improves; he is cured; his whole body is renewed and renovated. The fresh, pure, cool air, rich in life-sustaining oxygen, has been every how flooding his veins with new blood, and through it, has reached every defect in the system, and strengthened it. If he be brave enough, and can spare the time, he will stay through the winter, which is crowded with novel and lively experiences. If not, he returns late in autumn, to enjoy another summer in his sunny Southern home, where, with care to preserve his newly built constitution, he may feel his lease of life immeasurably lengthened. He will carefully resume his business, both with joy and hope, and throughout a long future life, treasure up the pleasures, and gratefully remember the benefits of his life in Minnesota.

This is no fancy sketch, as the experience of hundreds can testify. I had heard them before I came; I have heard them here from the lips of many enthusiastic beneficiaries; more convincing to me than all beside, I have felt them myself. But while many are thus benefited, others are unimproved: some, perhaps, injured by the change. To the young and constitutionally strong, in the first stages of consumption, or with weak lungs, the climate of Minnesota is a certain cure. With the lack of these conditions, the certainty of cure fails. The probabilities decrease as age, inherent weakness, and long course

of the disease have given it a firmer hold on its victim. Still, the proportion who are cured, at any stage of consumption, down to the very last, is greater by this than by any other method which can be adopted. But where the insidious destroyer has got so firm a grasp upon his victim that no mortal power can shake him off, it is useless—it is cruel—to rob the sufferer of home comforts, and take him far away, only, at last, to die. Cases of almost miraculous cures of emaciated, hopeless invalids are well authenticated in Minnesota. The subjects are still here, living witnesses. But they are rare; they are the exceptions, scarcely enough to warrant repetitions of the doubtful experiment.

For billious disorders, fever and ague especially, the Minnesota dry, pure, elastic atmosphere is an infallible remedy. There is no malaria here. The water which, in lower latitudes, gathers in low places, stagnant and fœtid, to breed pestilent effluvia, here sinks into the sandy soil to reappear in gushing springs. Rivers and lakes are all clear as mirrors. Moisture is all frozen out of the air every winter. Vegetation is not rank enough to produce extensive accumulations of decaying matter. Every condition, in fact, is favorable, and the curative process above given for consumption is repeated with increased rapidity of improvement and certainty of success.

Who Should Not Come to Minnesota.—From the *Saint Paul Daily Press*, June, 1869.

The *Medical Record* contains an interesting paper by Dr. Brewer Mattocks, of St. Paul, upon the effect produced upon the lungs by the peculiar climate of Minnesota, and in answer to the oft-repeated questions, "Who will be benefited by a residence in Minnesota?" and "At what stage of the disease tuberculous patients should be brought here?" To the first question he replies, all who would be benefited by a tonic course of treatment. Minnesota, he says, possesses a tonic climate, bracing and stimulating; and that it affords remarkable immunity from disease is proved by the fact that in 1868 but six American-born persons died of consumption in St. Paul, and the entire mortality was but one in eighty-two. But a certain class of pulmonary patients should not come here; those who

cannot endure cold, and who are seemingly "withered up" by it. They are, as a general thing, of a phlegmatic temperament, anæmic and bloodless, having no life or vitality, and desiring none. Such should be sent South, although there is usually but little hope for such patients. But another class, who are of a nervous-sanguine temperament; who say they will or they won't, and dread and shrink from the South, saying they cannot breathe there, will be benefited by the dry, bracing air of Minnesota. Bronchial patients, also, contrary to the general supposition, should come here.

To the second query, "At what stage of the disease should consumptives come to Minnesota?" Dr. Mattocks replies, as a general rule, when they can travel without inconvenience or much fatigue. "The sooner the better, even before the cough, if consumption is expected. The golden opportunity is missed if the patient waits beyond the period which the inconsiderate call laziness, for the cure of which, perhaps, the well-meaning, but injudicious physician prescribes exercise; a period often overlooked at the time—a stage called the 'pre-tubercular stage.'"

The Doctor adds:

"It is held that in the New England States the reason for so large a death-rate by consumption is cold and moisture, brought about by sudden changes. The same rule holds true in most, if not all, of the other States, so far as each State is exposed to such influences; that the general treatment for the disease is the removal or modifying of the cause, so far as we are able; and as in many instances the cause is climatic, we think the treatment should be such. As remedies are prescribed suitable for individual cases, so should we prescribe a climate, ever bearing in mind that the same remedy given for the same disease oftentimes affects two persons entirely differently, by reason of peculiar idiosyncrasies. This holds true as regards climate—hence the necessity of a patient and careful examination into all the circumstances connected with each case; and by all means let it not be confined to the chest, but let age, sex, temperament, tastes, individual preferences, means and general condition of health exert their influence on the mind of the physician before venturing an opinion as regards a change of climate."

MORTALITY OF THE STATE COMPARED WITH OTHER AMERICAN AND EUROPEAN STATES.

	Population.	Deaths.	Per centage.	One for every
Alabama	964,201	12,760	1.32	75
Arkansas	435,450	8,860	2.03	49
California	379,994	3,705	.97	102
Connecticut	460,147	6,138	1.33	74
Delaware	112,216	1,346	1.11	90
Florida	144,425	1,769	1.25	79
Georgia	1,057,286	12,807	1.21	82
Illinois	1,711,951	19,263	1.12	88
Iowa	674,913	7,260	1.07	93
Indiana	1,350,438	15,205	1.12	88
Kansas,	107,306	1,443	1.34	74
Kentucky	1,155,684	16,467	1.44	70
Louisiana	708,002	12,329	1.74	57
Maine	628,379	7,614	1.21	82
Maryland	687,049	7,370	1.07	93
Massachusetts	1,231,063	21,304	1.73	57
Michigan	749,113	7,399	.98	101
Minnesota	172,123	1,109	.64	155
Mississippi	791,305	12,214	1.54	64
Missouri	1,182,012	17,557	1.48	67
New Hampshire	326,073	4,469	1.37	72
New Jersey	672,035	7,525	1.11	89
New York	3,880,735	46,881	1.20	82
North Carolina	992,622	12,607	1.27	78
Ohio	2,339,511	24,724	1.05	94
Oregon	52,465	251	.47	209
Pennsylvania	2,906,115	30,214	1.03	96
Rhode Island	174,620	2,479	1.41	70
South Carolina	703,708	9,745	1.38	72
Tennessee	1,109,801	15,176	1.36	73
Texas	604,215	9,369	1.55	64
Vermont	315,098	3,355	1.06	93
Virginia	1,596,318	22,474	1.40	71
Wisconsin	775,831	7,129	.92	108
District of Columbia	75,080	1,275	1.69	58
Nebraska	28,841	381	1.32	75
New Mexico,	93,516	1,305	1.39	71
Utah	40,273	374	.92	107

Oregon alone excels Minnesota in a light mortality; and this is only apparent. It is explained by the absence of families of children in a country so new as that in 1860, and by the absence of non-resident consumptives who come to Minnesota too late and die—swelling our mortality list; while the humid atmosphere of Oregon prevents it from being a resort for consumptives.

According to Professor Guy, the proportion of deaths to population is as follows:

Austria, 1 in 40.	Belgium, 1 in 43.
Denmark, 1 in 45.	England, 1 in 46.
France, 1 in 42.	Norway & Sweden, 1 in 41.
Portugal, 1 in 40.	Prussia, 1 in 39.
Russia, 1 in 44.	Spain, 1 in 40.
Switzerland, 1 in 40.	Turkey, 1 in 50.
United States, 1 in 74.	Upper Canada, 1 in 102.
Lower Canada, 1 in 92.	

Dr. Mattocks, *Superintendent of Health*, at St. Paul, in a letter to the *Journal of Chemistry*, on the climate of Minnesota, July 18, 1868, after discussing the old custom of recommending consumptives to southern latitudes, says:

> A tonic, bracing air is now recommended for lung difficulties, a dry atmosphere, a healthy climate: such an one is Minnesota. The question is often asked, "Why is Minnesota a good climate for consumptives? What do you claim for your climate?" First we claim that Minnesota is one of the healthiest, if not the healthiest State in the Union, all things considered. I conceive it folly to send a patient to India from England, to be cured of consumption, at the expense of a liver disease; or to the Mediterranean, to die of inflammation of the lungs; or to Cuba, or to Florida, to die of cholera or yellow fever, or some disease of the bowels. The Mediterranean is a great resort for invalids, yet, the natives to an alarming extent die of consumption. The same, I think is true of the Sandwich Islands. In the city of Mexico they are to a wonderful degree free from phthisis; yet in other diseases they have an alarming mortality.

Dr. Mattocks, in the letter above quoted, to the *Journal*

of Chemistry, says: "The average of deaths the world over is about 22 per 1000 inhabitants. The death rate of St. Paul (official report of 1867) was 11 per 1000, just one half the average number. In the State at large of course the death rate would be much less."

In his official report, as City Physician, Jan. 1st, 1869, he says: "The proportion of deaths by disease to our population is as follows (this does not include invalids who came here for their health:)

1867—In St. Paul	1 in 90
1868—In St. Paul	1 in 82

"In contrast, I would respectfully refer the Council to the death rates of other cities, from official reports:

Average—New York, about.....	1 in 33
Average—London.....	1 in 45
1855—Boston	1 in 39
1863—Boston	1 in 41
1854 to '67—Providence, R. I.....	1 in 43 to 57
Average—Liverpool.....	1 in 44
Average—Philadelphia	1 in 44 to 57
1867—Chicago	1 in 49
1868—Chicago	1 in 45
1868—St. Louis	1 in 42

CHAPTER VI.

THEORY OF THE CLIMATE.—*Its anomalies explained; its daily temperature given; and the mean temperature compared with that of other places.*

Spring.—The rivers generally open from the 20th of March to the 1st of April. Plowing generally begins about the 1st of April—sometimes earlier. Wheat has been sowed in March several years. The springs are

cool, and April very windy, and like the March of the Middle States. The weather becomes warm about the 15th or 20th of May—sooner than this it is unreliable. The mean temperature of the spring, at Fort Snelling (Central Minnesota,) is 45°6; Chicago, 3° south of us, 44°9; Detroit, 45°9; Rochester, N. Y., 44°6; Newport, R. I., 45°9. We are from 2 to 10 degrees warmer than Eastport, Maine, which is 40°15; Fort Kent, Maine, 35°22; Concord, N. H., 42°60; Buffalo, N. Y., 42°73; and other places, all in lower latitudes. These figures are mostly the result of observations for 30 to 40 years, at the different military posts, officially reported. In Europe our spring finds its equivalent in Bremen, Germany, and Edinburg, Scotland.

Summer.—While the weather is as warm as in Central Illinois and Ohio, Southern Pennsylvania and New Jersey, there is nearly always a cooling breeze, relieving one of what would elsewhere be the oppressing and debilitating effect of the summer heat. The nights are nearly always cool and refreshing. Cooling showers, with splendid electrical displays, are frequent, and nearly always occur at night. Mean temperature, 70°6; Philadelphia, 70°8; Oberlin, Ohio, 70°2; Trenton, N. J. 70°7. To one who has lived in the latitude of the Middle States like the writer, and suffered the debilitating and oppressive heat of their summers, the sensation of a Minnesota summer is one of *relief*—cooling, refreshing, invigorating.

Autumn.—Autumn is simply a continuation of summer, mellowed with the subdued heat, and chastened with the milder sunshine of Indian summer, which commencing early in October, and continuing till the last of November, makes our autumns the golden season of the year, and to nearly all the most delightful. Mean temperature, 45°9; Kingston, Canada West, 45°; Montreal,

45°; Malone, New York, 45°. Frost seldom occurs earlier than the last of September or first of October; though it sometimes comes a month earlier, as in Ohio, Illinois, and Michigan.

Winter.—Cold, bright, exhilarating, dry and crisp—the prevailing temperature remarkably pleasant. We have "cold snaps" several times during the winter, lasting, as in other places, three or four days—the mercury at daylight falling to 10, 15, 20, and some years once or twice to 30 and 40 below zero—always rising much higher as the sun rises. The *average* of 16°1 above zero for 35 years shows that these extremes are rare. Many enjoy them for their tonic effect—their stimulating power being remarkable.

The air at such times being as still and calm as a May morning, with no moisture, compensates for the low temperature, and rarely causes suffering or interruption to outdoor business and amusements. In fact winter is the gayest of our seasons. Skating parks on the river bring out the young and middle aged—ladies and gentlemen—whose sports are often prolonged till ten at night. Race tracks on the ice bring out the fast horses; the hill sides are thronged with Young America "coasting" with sled and cutter; the streets ring with the continual gingle of sleigh bells; concerts, balls, masquerades, fairs, festivals and lectures occupy the long evenings; and the winter runs the round of its sunny days and brilliant nights with far less suffering and far more exhilaration than if those sunny days were warmed with a July sun, or their tonic crisp exchanged for the humid air and the mud and sleet of a milder clime.

Mean temperature—16°1; Montreal, Canada, 16°; Houlton, Maine, 16°4; Williamstown, Vt., 16°4; Hanover, N. H.,16°1.

MEAN TEMPERATURE THE WHOLE YEAR—44°6; coinciding with that of Central Wisconsin, Michigan, Central New York, New Hampshire, and Maine.

DAILY TEMPERATURE OF THE WINTERS OF 1867–8 and 1868-9.—Strangers are apt to regard our winters as *arctic*, a solid mass of unvarying cold without the relief of mild, or genial weather. Sixteen above zero, the *average* temperature, misleads them into this belief. To correct this idea, we give below the daily temperature of two winters —one an unusually cold one, the other unusually mild.

Daily Temperature of the Winter of 1867–8, as published in the *St. Paul Daily Pioneer:*

At 6 A. M.	12 M.	6 A. M.	12 M.	6 A. M.	12 M.
Dec. 1,	26°	35°	Jan. 1,	22°	28°	Feb. 1,	9°	26°
2,	15	34	2,	24	28	2,	12*	5
3,	13	21	3,	21	32	3,	8*	27
4,	22	35	4,	24	29	4,	10*	5
5,	14	21	5,	15	32	5,	20	16
6,	23	33	6,	6	6	6,	14*	2
7,	0	12	7,	12*	0	7,	7	28
8,	1	24	8,	16*	5	8,	0	5
9,	15	34	9,	9*	8	9,	17*	5*
10,	24	33	10,	1	16	10,	27*	9
11,	21	28	11,	14*	4*	11,	12*	7
12,	13	23	12,	32*	12*	12,	1*	17
13,	15	23	13,	32*	9*	13,	2*	11
14,	20	31	14,	no record		14,	15	44
15,	23	33	15,	9	18	15,	15	32
16,	27	30	16,	11*	12	16,	31	46
17,	18	14	17,	9*	17	17,	30	40
18,	5*	6	18,	5*	11	18,	29	45
19,	15	22	19,	20	28	19,	23	41
20,	11	16	20,	15	22	20,	29	48
21,	16	28	21,	10	24	21,	no record	
22,	19	26	22,	18	33	22,	13	17
23,	7*	10	23,	23	27	23,	18	20
24,	20	26	24,	6*	20	24,	19	26
25,	34	36	25,	0	22	25,	no record	
26,	5	25	26,	1*	14	26,	"	
27,	15	16	27,	10*	8	27,	"	
28,	0	11	28,	4	17	28,	"	
29,	3*	12	29,	14*	2			
30,	9*	10	30,	12	18	* Indicates below zero		
31,	no record		31,	4	18			
Mean 15°53.			Mean 4°52.			Mean 12°80.		

1868-9.

At 6 A. M.	12 M.	6 A. M.	12 M.	6 A. M.	12 M.
Dec. 1,	20° 28°	Jan. 1,	22° 26°	Feb. 1,	21° 30°
2,	19 28	2,	20 34	2,	26 30
3,	27 32	3,	31 42	3,	24 29
4,	31 35	4,	31 30	4,	3 22
5,	28 33	5,	19 26	5,	3* 28
6,	29 36	6,	20 36	6,	23 32
7,	26 32	7,	22 40	7,	30 34
8,	12 19	8,	16 26	8,	32 42
9,	2* 8	9,	14 18	9,	34 38
10,	12* 3*	10,	2* 10	10,	23 40
11,	13* 3	11,	0 13	11,	21 38
12,	8 15	12,	16 30	12,	35 46
13,	3 20	13,	23 36	13,	36 40
14,	24 32	14,	21 37	14,	25 30
15,	24 33	15,	16 30	15,	21 29
16,	22 40	16,	9 27	16,	3 41
17,	26 43	17,	17 28	17,	22 37
18,	29 37	18,	26 30	18,	26 30
19,	32 38	19,	16 32	19,	10 26
20,	27 30	20,	18 34	20,	3* 14
21,	11 20	21,	19 34	21,	4* 14
22,	4* 14	22,	13 29	22,	11* 9
23,	1* 4	23,	24 37	23,	7* 20
24,	6* 11	24,	21 26	24,	5 18
25,	3 26	25,	5* 13	25,	14 21
26,	27 34	26,	4* 14	26,	5* 15
27,	12 27	27,	26 37	27,	9* 14
28,	10 32	28,	25 29	28,	no record
29,	7 20	29,	24 27		
30,	14 27	30,	12 19	* Indicates below zero.	
31,	10 22	31,	11 23		
Mean	16°37.	Mean	19°37.	Mean	18°73

Mean Temperature of Winter of 1867–8, 10°95.
" " " 1868–9, 18°57.
" " " 1859–60, 12°49; 1860–1, 13°82; 1861–2, 10°52; 1862–3, 19°14; 1863–4, 17°81; 1864–5, 16°71; 1865–6, 9°18; 1866–7, 13°67.

From these figures it will be seen that the last winter was the mildest of any, except one, for ten years, and the preceding winter the coldest of any but two for ten years.

There were 17 days at or above the freezing point, and

probably 21, during the cold winter, and 34 during the mild winter.

The Chicago Presbyterian, of February 27th, 1869, commenting on the mild winter, said: "The beautiful weather of this winter (bright sunshine, just cold enough to preserve the sleighing,) surpasses anything I ever before saw, east or west. It is wonderful." So writes a correspondent.

"But the note-book of one of the oldest inhabitants of Minnesota shows the following record: The winter of 1851–2 and 1859–60 were similar to the present season. They were quite as favorable as now, as regards the mildness of the weather, and an early spring was reached, in each instance, without experiencing a heavy chill. In 1858 wheat was sown in Fillmore County on the 25th day of February. In 1860 farmers commenced sowing their wheat on the 7th day of March, and nearly all the seed was put into the ground during that month."

Winters of 1847-8-9.—From the meteorological journal kept at Fort Snelling, we have the number of days given for three winters, during January, which is always the hardest winter month, and likewise the degree of cold, when the mercury was below zero.

January, 1847.—16 days with the following degrees below zero: 11, 12, 14, 18, 22, 21, 22, 16, 10, 24, 12, 12, 6, 4, 22, 4.

January, 1848.—5 days with the following degrees below zero: 24, 11, 2, 4, 6.

January, 1849.—14 days with the following degrees below zero: 1, 9, 14, 7, 25, 15, 1, 13, 6, 29, 7, 10, 8, 4.

When Cold Here it is Cold Everywhere.—By reference to the table of temperature for December, 1868, it will be observed that the 11th was the coldest of the month—the mercury being 13° below zero.

By telegraph it appeared that the same cold spell prevailed all over the country. Milwaukee was reported at 10° below zero; Madison, 8° below; St. Louis, 7° below; Omaha, 10° below; Cincinnati, 10° below; Cairo, Ill., 10° below. The following is an extract from the telegraphic dispatches to the St. Paul papers about this time:

CHICAGO, Dec. 12.—Reports from all sections of intense cold. At St. Louis and Kansas City the mercury was 15 degrees below zero. [Another account says 7 degrees.]

AUGUSTA, Ga., Dec. 12.—A heavy sleet last night; weather cold.

DETROIT, Dec. 12.—Extreme cold weather has put a sudden stop to navigation. River full of ice, and jammed in near Malden.

THEORY OF THE CLIMATE.—*Effect of winds; effect of moisture; effect of Pacific and Gulf Stream, &c. Why we do not feel the cold.*

What is Cold?—When we say we are cold, we simply mean that our body has parted with its normal heat. This may be caused by a damp, raw atmosphere, with the mercury at 32° above zero, as well as by a dry, crisp atmosphere, with the mercury at 32° below zero. It may be caused by the application of a wet blanket with the mercury at summer heat, or by exposure to a raw wind with the mercury at summer heat.

You may be as cold in Indiana or Kentucky, or Texas, with a raw, chilling, damp atmosphere, with the mercury at 32° above zero, as in Minnesota with the mercury at 32° below.

Why we do not feel the Cold.—A moist atmosphere is a conductor. Wind is a conductor. Rarely having either in Minnesota during our cold terms, the warmth of the body is retained, and not abstracted; and a sensation of chilliness is rare, even in the coldest weather.

Effect of the Wind.—Dr. Kane, in his Diary in the Arctic Regions, says the wind adds 30° to the cold. He says:

"Our experience has taught us to prefer 40° below zero, with a calm, to 10° below with a gale in the face. * * I walked myself into a comfortable perspiration this morning with the mercury at 42° below zero. * * A breeze sprang up; it was very gentle, but instantly the sensation came over me of intense cold."

Dr. Owen, in his official report (1851) on Minnesota, says:

"Since it is usually very calm when the thermometer is so low, the cold is not felt so much as when the mercury is higher with a breeze."

Absence of Wind during the cold terms in Minnesota.—This we have proved by the personal testimonials on the climate in preceding pages, and by Dr. Owen, just quoted. We merely add the result of years of observations published in the official reports from the different military stations of the U. S. as to the force of the wind in Minnesota and other places. In Minnesota, 1.87; Connecticut, 2.67; New York, 2.96; Maine, 2.63; Pennsylvania, 2.20; Michigan, 2.26; Iowa, 2.48; Kansas, 2.09.

We do not mean to say that we have no wind during the winter, but merely that it is rarely windy during the "cold terms." What wind we have is in the moderate weather almost entirely.

Prevalence of Southerly Winds during the year.—From the Army Register kept at Fort Snelling of the temperature, &c., twelve years' observations show that the yearly average of south and southerly winds was 172 days, or nearly half the year.

Dryness of the Winter Air.—Absence of Moisture.—Besides the personal testimonials, in preceding pages, to show that we have rarely a rain in winter, we present the following:

"Rain has not fallen in winter but once in many years. The whole winter is a radiant and joyous band of sunny days and star-lit nights."—*Wheelock's official report.*

Inches of water falling in rain and snow during the winter.—Minnesota, 1.92; Philadelphia, Pa., 9.26; New York, 10.79; Mass., 10.83; Oregon, 26.80; Mo., 6.29; R. I., 13.30.—*Disturnel on Climate.*

Cold not regulated by Latitude.—Prof. Maury, formerly Superintendent of the Observatory at Washington, says: "Most men of our age were educated under the belief that parallels of latitude and terrestrial climates are correlatives; that we might tell the temperature of any unknown country or region of country if we knew its latitude. Humboldt and Dove exploded this idea, with their isothermal lines. For example, they show that the mean annual temperature of North Cape, lat. 70°, in Europe, is the same as that along the north shore of Lake Superior, in lat. 50°. Here is a difference of 20° of latitude without any difference in the average annual temperature of the two places."

Disturnel, "*On the Influence of Climate*," says: "The temperature of latitude 40° on the Atlantic finds its parallel in latitude 50° on the Pacific." He quotes an English writer as saying: "The western side of the continent is greatly warmer than the eastern. For example, the Island of Sitka has a mean annual temperature of 42°, while Nain, in Labrador, near the same latitude, 57°, has a mean temperature of only 29°."

Quebec, in lat. 46°49, has a mean of 40½°; Ottawa, Canada, in 45°23, a mean of 42½°. He quotes Bonny-

castle, on Newfoundland, as saying if the laws of climate were regulated by the thermal zones which philosophers have drawn around the globe, Newfoundland would be an abode for man, equally free from great heats and from intense cold, as it lies in nearly the same parallels as France; whereas it has the general temperature of the European countries situated 15 or 20 degrees higher than the northern shores of that fertile country.

He places the mean annual temperature of St. John, Newfoundland, 47½° north, the same as St. Petersburg, Russia, 60° north, viz., 39° Fah.

The Gulf Stream and Warm Air from the Pacific Ocean.—The same author says the great Equatorial Current and Gulf Stream, carrying in its extended course warmth and moisture, penetrates the Valley of the Mississippi far inland, until met by counter currents of air sweeping across the Rocky Mountains north of the 49th parallel.

Prof. Hind's Report on the Sascatchewan, says:

"Warm air from the Pacific Ocean passes at certain periods of the year over the whole range of the Rocky Mountains in British America and the United States. The winds become *more* warm and *more* dry as they descend the eastern Rocky Mountain slope, until they meet the moist winds from the Gulf of Mexico, passing up the Valley of the Mississippi."

As a consequence of the Pacific current, Capt. Mullan's report is quoted by Mr. Disturnel, showing that the temperature of Walla-Walla, in latitude 46°, is similar to that of Washington City, in latitude 38°; the temperature of Clark's Fork, in latitude 48°, to that of St. Joseph, Mo., in latitude 41°; the temperature of Bitter Root Valley, in latitude 46°, to that of Philadelphia, in latitude 40°.

Gov. Isaac I. Stevens' report gave the winter temperature of Fort Benton, 1853–4, on the Missouri River, in

latitude 47°49, as 25° above zero, while at Quebec, 1 degree further south, the same winter it was 11° above zero, and at Montreal, nearly 3 degrees further south, it was 13° above zero: Fort Benton, in latitude 47°49, having the same winter temperature as Chicago, in latitude 41°53.

These facts are sufficient to dispel the theory that Minnesota must be cold and inhospitable, because of its high northern latitude. Moreover, "The favorable climate and soil are not confined to Minnesota and Dakota, but extend north to the valleys of the Assiniboine and Sascatchewan rivers, in British America."

Apropos to this, Carlton, correspondent of the *Boston Journal*, in July, 1869, wrote from Red River:

One of the most wonderful features of this region is its climate. Here we are in latitude 46, several degrees further north than Boston, but the summers are longer than in Massachusetts, and the winters, though colder, are less severe than in that State. The air is dry, the days calm; and the hundreds of men that I meet, who have come hither from Maine and New Hampshire, selecting this as their future home, say that this climate is far preferable to that of New England.

Yesterday I saw a Scotchman, who lives five hundred miles north of this point in a straight line, on the shore of Lake Winnipeg. The winter, there, he says, is not so severe as at Chicago. Scientific men have speculated on this phenomena, but we have seen no satisfactory explanation. Doubtless it is due to a combination of causes: the influence of the great lakes on the one side and the Rocky Mountains on the other; to the Missouri and Mississippi and Red rivers: to the currents of air sweeping up the Missouri valley from the dry plains of Nebraska. Be the cause what it may, the fact remains that here—reaching from Chicago northwest, over a territory embracing Wisconsin, Minnesota, Dacota, Northern Montana, and a vast region in the British Possessions—lie the wheat lands of North America.

THE ISOTHERMAL LINE, OR THE LINE MARKING THE SAME MEAN ANNUAL TEMPERATURE THROUGH AMERICA AND EUROPE, AS APPLIED TO MINNESOTA.—MINNESOTA FURTHER SOUTH THAN THE MOST POPULOUS EUROPEAN STATES.—From the *London Financial Chronicle:*

There is a portion of this country which promises in a few years to yield to none other in population, wealth and productions. It is a region, however, now comparatively unknown, of vast extent, of healthful climate and of large resources. It has for its streams the upper waters of the Mississippi, those of the Red River of the North, of the Assinniboine and of the Saskatchewan. It touches the shores of Lake Winnipeg, extends far westward along the borders of the United States and of the New Dominion to and beyond the Rocky Mountains. It has Lake Superior for its eastern limit. The State of Minnesota, part of Wisconsin, part of Dakota, and a broad section of the New Dominion lie within this region. At first thought one would say that this section was far to the northward, but a glance at the map shows that while St. Paul is in the latitude of Venice, the northern shore of Lake Superior is in the latitude of Paris, two hundred miles further south than London, and seven hundred miles further south than St. Petersburg. The summer isothermal line of seventy degrees, which passes through the wheat growing regions of Russia, and through Southern France, strikes this continent on Long Island, bends down into Pennsylvania, skirts the northern limits of Ohio and Indiana, passes from the foot of Lake Michigan to the Mississippi just north of St. Paul, and then sweeps up to latitude 52, three and a half degrees north of Paris. Some of our school misconceptions of geography are corrected by the practical knowledge we acquire in this day of enterprise and action. It is under and around this isothermal line that the richest wheat-growing regions of the United States lie, and it is near this line that the remarkable development of the last few years has been made.

The whole theory in a nutshell.—The above isothermal line is given as a concluding summary of the Minnesota climate. We will add one more, giving the whole theory of our climate in a nutshell.

Baron Von Humboldt remarks that "Humidity, a calm state of the air, the purity of the atmosphere, the degree of habitual transparency of the air, the serenity of the sky, have an important influence not only on the organic development of plants and the ripening of fruits, but also on the feelings and whole mental disposition of man."

Clarke, State Geologist, in his report, says of this, if he had visited Minnesota he would have said, "the degree of habitual transparency of the air and serenity of the sky *of Minnesota* have an important influence," &c.

Snow.—The average winter monthly fall of snow is given in Wheelock's official report as six inches: average depth during the winter, eight inches.

Rain.—*Inches.*—Winter, including snow (melted) 1.92; spring, 6.60; summer, 10.92; autumn, 5.98; whole year, 25.43. Oregon, whole year, 68.52; Missouri, 37.83; Texas, 22; Massachusetts, 42; New York, 33; Pennsylvania, 34. During the six warm and growing months: Minnesota, 19.35; Philadelphia, Pa., 20.94; Worcester, Mass., 23.15; Athens, Illinois, 26.30.—*Army Register.*

Frost.—Having as shown above, the spring, summer and fall temperature of the greatest agricultural States in the Union, with the additional influence of over 1000 lakes, a dry air, and a thoroughly drained soil, it is not too much to claim that we are equally free from untimely frosts, as well as less liable to be injured by them.

Mr. Wheelock's report gives the following record of frosts as reported from the *Army Register* kept at Fort Ridgely, in the same or a higher latitude than St. Paul.

Frost Record of Fort Ridgely.—*Earliest Fall Frost.*—1853, Sept. 20; '54, Oct. 4; '55, Sept. 27; '56, Sept. 19; '57, Sept. 29; '58, Sept. 8; '59, Oct. 18; '60, Sept. 11. The only two years reported show the earliest spring frosts May 11th and May 8th.

Scientific men hold the theory, and observation proves it, that the mercury may fall in Minnesota much below the freezing point, and on account of the dryness of the air, vegetation is not injured. Two late frosts this spring, falling after fruit trees were in bloom in the garden of the writer, failed to have the slightest effect on them, and the apples are now (in June) nearly an inch in diameter. Earliest frost in fall of 1869, Sept. 26th.

Our crops (given in another place) are the best answer to all cavils about frost. See "Agriculture" for more on the subject.

CHAPTER VII.

OFFICIAL DESCRIPTIONS OF A BEAUTIFUL COUNTRY.—THE SCENERY OF MINNESOTA.—Much on this subject having necessarily appeared in the descriptions of the different sections of the State, its groves, parks, lakes, prairies, &c., the tourist is referred to those descriptions as a complement to this chapter.

The following, from Dr. Owen's geological report, 1851, refers to that portion of Minnesota occupied by the lower magnesian limestone, which we have shown elsewhere to be Eastern Minnesota south of 45°, and part of Southern Minnesota:

> The constant theme of remark, whilst travelling in the region of the Upper Mississippi occupied by the lower magnesian limestone, was the picturesque character of the landscape, and especially the striking similarity which the rock exposure presents to that of ruined structures.

The scenery on the Rhine, with its castellated heights, has furnished many of the most favorite subjects for the artists' pencil, and been the admiration of European travellers for centuries. Yet it is doubtful whether in actual beauty of landscape it is not equalled by that of some of the streams that water this region of the Far West. * *

Nature has here fashioned on an extensive scale and in advance of all civilization, remarkable and curious counterparts to the artificial landscape which has given celebrity to that part of the European continent. * * We find the luxuriant sward clothing the hill slope even down to the water's edge. We have the steep cliff shooting up through it in mural escarpements. We have the stream clear as crystal, now quiet and smooth and glassy, then ruffled by a temporary rapid, or when a terrace of rock abruptly crosses, broken up into a small romantic cascade. We have clumps of trees disposed with an effect that might baffle the landscape gardener, now crowning the grassy height, now dotting the green slope with partial and isolated shade. From the hill tops, the intervening valleys wear the aspect of cultivated meadows and rich pasture grounds, irrigated by frequent rivulets that wend their way through fields of wild hay fringed with flourishing willows. Here and there occupying its nook on the bank of the stream at some favorable spot, occurs the solitary wigwam, with its scanty appurtenances. On the summit levels, spreads the wide prairie, decked with flowers of the gayest hue—its long, undulating waves stretching away till sky and meadow mingle in the distant horizon.

The whole combination suggests the idea, not of an aboriginal wilderness inhabited by savage tribes, but of a country lately under a high state of cultivation and suddenly deserted by its inhabitants—their dwellings indeed gone, but the castle homes of their chieftains only partially destroyed and showing in ruins on the rocky summits around.

Carlton, in July, 1869, writes the *Boston Journal* from Minnesota:

The larger lakes are bordered by parks and groves, presenting landscapes of indescribable beauty. Many a pioneer on this Northwestern verge of civilization may look out from the door of his log cabin on scenery as enchanting as any in Old England.

True, there is no background of mountains, no rocky crag, or deep and tortuous defiles; but there are undulations, sunny slopes, gentle swells, rounded wood-crowned summits, looking down upon lakes and ponds dotted with emerald islands, or clear waters dancing in the sunlight or reflecting from the glassy surface the transcendental beauty of the landscape.

This region is attractive not only because of its soil and genial clime—not because there is great prospect of material wealth—but here nature has done much to promote that æsthetic culture, without which a community never can reach the highest plane of civilization. Here, in coming years, on the borders of these lakes, costly mansions will be reared. Where now the pioneer feeds his pigs will be seen parks and lawns.

Of the Red River Valley, he says:

The sun shines through a mellow haze, while all around as far as the eye can see there is such richness of verdure, such wealth of greenness and display of flowers, that the language descriptive of the Elysian fields and the choicest and best of poesy is too forceless and feeble to convey an idea of the richness and beauty of this fair region of the world.

North Shore, Lake Superior.—Scenery.—"The scenery of the whole extent of the ranges north of the lake is bold and picturesque.

"*The Great Palisades* are rocks rising from the margin of the lake, near Palisade Creek, to the height of over 300 feet, presenting perpendicular columns from 60 to 192 feet high, and from 1 to 6 feet in diameter. From the top of these rocks a magnificent view was afforded of the Apostle Islands, 30 miles distant; and the outlines of the high ranges south of the lake, from the Porcupine Mountains to Fond du Lac, were distinctly visible."

He speaks of rocks projecting into the lake 100 yards or more, that, with their cappings of small cedars and firs, present the most picturesque appearance imaginable.

Dr. August Hanchette, State Geologist, 1864, says "there are forty-three rivers and creeks, * * the

majority of which find their way to the great lake over rippling cascades or frowning precipices, magnificently high."

Hon. Thomas Clarke, Assistant Geologist, 1864, specifies a cascade in the Wisacode Valley as "one of the most wild and exciting waterfalls to be met with in this wild region, where all are truly wild when compared with those more generally known." "One of the most symmetrical," he again describes as "just such scenery as the school girl, in her first attempts at painting, would delight to sketch." He speaks of firing a gun near Little Marias Bay, causing "fourteen distinct pairs of echoes, rolling back over the crags and bluffs like the rolling of thunder in a mountain region, and putting the adjacent forests in an uproar as of artillery; these followed by several indistinct ones, blended with the rumbling of a hundred cars winding their way in the distance, beset by dozens of ambushed mountain howitzers."

Major Long's report of a topographical survey, 1824, compiled by Prof. Keating, describes a cascade on White Fish River (on the Canada side of the line,) about 30 miles above the mouth, as "one of the most magnificent cascades to be witnessed in any country," called by the Indians the "Falls of Kakabikka, or Cleft Rock." The river is about fifty yards wide, with an unusually large body of water, and is precipitated in a dense sheet down a perpendicular precipice more than one hundred and thirty feet, into a deep chasm, bounded by perpendicular cliffs of the height just mentioned. * * * The scenery, although it is less extensive, yet vies in grandeur and sublimity with that of the Falls of Niagara. In beholding it the spectator is inspired with equal awe, the principal features are equally terrific, while the deep intonation, which is not only heard but felt at the distance

of 400 or 500 yards, is more sensible than that of its rival, and has a nearer resemblance to the roar of distant thunder and the rumblings of an earthquake."

As there are falls upon "the forty-five rivers and creeks" alluded to by Hanchette, we cannot, of course, describe all. The above examples will give the reader an idea of their style.

St. Louis River Falls.—Dr. Owen describes the Lower Falls as "a series of cascades, ten or eleven in number, six to ten feet high." The Second Falls as presenting "a much more imposing appearance than the lower ones." "The Third Falls, like the others, are made up of a series of cascades, and for grandeur and beauty equal any scenery of the kind I have met with south or west of Lake Superior. Although the fall, including the rapids, is only forty-five feet, the disposition of the rocks and other surrounding scenery combine to render the effect indescribably beautiful." "The Fourth Falls are made up of a series of five large cascades and numerous smaller ones—height over 100 feet."

Mississippi River Scenery.—Long's Report says: "This first day's voyage on the Mississippi was delightful to those who had never been on that river before; the magnificence of the scenery is such, its characters differ so widely from those of the landscapes which we are accustomed to behold in our tame regions; its features are so bold, so wild, so majestic, that they impart new sensations to the mind."

Rev. Dr. H. A. Boardman, of Philadelphia, in a letter to the *Philadelphia North American*, Oct., 1868, says:

> Confessing, as I do, to some native pride in the Hudson, I am constrained to say that with the exception of the Highlands, the ten or fifteen miles of its passage through the Catskills, the scenery of that river is not to be compared with the Mississippi.

The countless islands, the lofty bluffs on either side, gentle and precipitous, pyramidical and dome-like, the ever varying channel of the noble stream, now shut in between narrow cliffs, and now spread out into an expanse of two or three miles, the magnificent panorama opening upon you at every turn, to say nothing of the rich foliage of the forests and the myriad wild flowers that carpet the margins of the islands—these are a few only of the elements of beauty which regale the traveler on the Upper Mississippi. But my object is too practical to justify me in dwelling upon the poetry of this region.

Prof. Maury says of our lakes: "They give variety and beauty to the landscape; they soften the air, and lend all their thousand charms and attractions to make this goodly land a lovely place of residence."

Of our clear bright nights, so bright that you may often read by moonlight, he says: "At the small hours of night, at dewy eve and early morn, I have looked out with wonder, love, and admiration, upon the steel blue sky of Minnesota, set with diamonds, and sparkling with brilliants of purest ray. * * A telescope, mounted here in this atmosphere, under the skies of Minnesota, would have its powers increased many times over what they would be under canopies less brilliant and lovely."

We might go on and make a volume of descriptions of Minnesota scenery. We have said nothing of the Falls of St. Anthony (see description of Hennepin County for this;) nothing of the far-famed Minnehaha, of Minneinneopa, near Mankato, scarcely less beautiful; nor of scores of other falls, cascades, caves, mounds, and beautiful views; but we have said enough to show the reader that this is a charming land for the tourist who would spend a few months in recreation, and while he enjoys the pastimes of hunting and fishing, would also feast his eyes upon the beautiful, and breathe a pure and invigorating

atmosphere. Minnesota artists have photographed about 240 different varieties of Minnesota scenery, to which we refer as a concluding chapter on this subject.

CHAPTER VIII.

MINNESOTA AS A FARMING COUNTRY.—As we prefer to give official or outside disinterested testimony on every subject, resting as little as possible upon our own language, which the reader may say is warped and colored by self interest, we will let Dr. W. B. Cheadle, an English gentleman, speak first in general terms.

In a letter which we extract from the *London Railway Record*, dated Nov. 17, 1865, Dr. Cheadle, who accompanied Lord Wilton in a tour through this country, speaking of the superior growth and development of the American States over those of British America, says:

> Canada, as you know, is a land of forests, and a dense growth of timber covers the ground the settler is called upon to till. The soil is probably rich enough, but the labor and expense of clearing is considerable, and the delay a great drawback, for it may be years perhaps before he will be able to plough fields, clear from stumps and roots, or create any extent of pasturage for cattle, everything has to be prepared under difficulties—arable land and pasturage. In the Western States it is far otherwise: broad prairies waving with the most nutritious grasses, and diversified by woodlands and hills, lakes and streams.
>
> Minnesota for example, the most northerly and *the richest of them all, is like one great park.* Farms are almost ready made to the settler's hand. He builds his house and fences his fields with timber from one of the neighboring woods.
>
> The deep and fertile soil of the prairie lies ready for the plough without obstruction; a portion of this he prepares with-

out difficulty for his grain and root crops, and the rest affords an inexhaustible extent of pasture for his flocks and herds, which grow fat on the herbage in which myriads of buffalo grazed in times gone by.

We will let Hon. Horace Greeley follow.

Horace Greeley on Minnesota.

OFFICE OF THE NEW YORK TRIBUNE.
New York, June 1st, 1868.

My Dear Sir: Fifteen to twenty years ago, when Minnesota first challenged attention, I was not prepossessed in her favor. I knew that her winters were apt to be long and severe; but I was born to face winters more snowy, though less steadily cold, in New Hampshire. But she seemed to have broken out all over with land speculators, bankrupt, seedy office seekers, and party wire workers, who had outlived alike their usefulness (if such ever was) and popularity in older communities and gone up the Mississippi as a consequence of having been decisively rowed up salt river. I saw that your State imported not only loafers in great abundance, but the bread they ate as well as the whisky they drank; and I did not see how she could stand it (you must pardon my weakness) in the defection of home industry.

Years passed: I was invited to visit her at a great railroad excursion party, but declined; then to speak at her State Agricultural Fair of 1861, and accepted; but Bull Run intervened, and I had not the heart to go, and begged off. I was re-invited, but declined to go till we should be delivered from the dire necessity of carnage. At length came 1865, bringing with it a first installment of peace; then I went. I found her soil better than I had hoped—warm, fertile and just about rolling enough to secure proper drainage at little or no expense. Her Indian corn was not luxuriant, but a fair growth; her grass had plainly been ample; her wheat and oats better (in the average) than I had ever before known. Her railroads were just beginning to promise benificence. In lumber she was greatly favored. Her vegetables (as exhibited at the State Fair) I had seen surpassed in California alone. In fruit alone did she seem deficient; but she was still in the gristle of her youth. Her butter, cheese and honey would justify any praise.

Yet I was most impressed by her men and women. I never saw so few chronic idlers, except among the Mormons in Utah. Every one seemed to have work and to make a business of doing it. I knew that many had gone to her for health; I rejoiced to perceive that most of them had found it. In quiet homes as well as at the Fair, I found every one strong, elastic, active, vigorous, buoyant. I realized that they not only would but *did* accomplish more in seven months of unfrozen earth than so many people would in ten months of a softer, a more enervating clime. In short, I learned to like her heartily, and to expect great things of her people and her growth in a future by no means remote. God bless her! Yours, HORACE GREELEY,

To J. W. McClung, Esq., St. Paul, Minn.

MINNESOTA COMPARED WITH ILLINOIS, IOWA, AND WISCOSIN.—Wishing a candid, moderate, and fair statement of the relative agricultural capacity of these States, from some one qualified by actual observation to judge, we addressed a note to Geo. B. Wright, Esq., and elicited the following reply. He is an old surveyor, and his statements can be relied on.

Minneapolis, Minn., May 10th, 1869.

J. W. MCCLUNG, ESQ., ST. PAUL, MINN.—*Dear Sir:* In reply to your note of inquiry of May 6th, I would say—I have been for the past fifteen years engaged in surveying and land examining in different parts of the Upper Mississippi Valley, and have made special and minute examinations of farming lands with reference to their value for that purpose, to as great an extent perhaps as any person living north and west of Chicago, and for eight years past have been engaged in government surveying. During that time I have become pretty intimately acquainted with nearly all of Minnesota south of latitude 47° (except the south-eastern portion of the State,) and to some extent with some of the finest portions of Iowa, Wisconsin, and Illinois (as far south as the Ohio and M. R. R.)

To compare Minnesota with those States:—

1st. As to average quality and productiveness of soil and capacity to sustain a dense population, I should place Illinois and Iowa first, then Minnesota, and lastly Wisconsiu, while if

we leave off the north-eastern portion of Minnesota (valuable chiefly for timber and minerals,) the remainder, about equal in area to Iowa or Illinois, will average fully equal in agricultural capacity with either of those States, and very far in advance of Wisconsin, of which a quite small proportion only is of the best quality for farming purposes.

2d. *Concerning Crops.*—Probably Illinois will always lead in the production of corn. Though Minnesota produces good crops of that, much better than in the most favored spots in New England—while it is unquestionably the best wheat producing State east of the Rocky Mountains; and for the raising of most of the small grains—hay, potatoes, and root crops generally—it is fully equal if not better than either of the three States mentioned.

3d. *For Stock Raising*, and the production of beef, wool, butter and cheese, Minnesota is I think better adapted than either of the States mentioned. The dry atmosphere, and equable temperature of the winters, are specially valuable for wool growing, and the almost unlimited extent of natural meadows (not marshes,) covered with a superior quality of fine grass and distributed so that every farm has more or less of them, renders the getting of winter supplies for stock a simple and inexpensive matter. I have this spring noticed hundreds of cattle and other stock, which during the winter were fed exclusively on this native hay, costing to put up not over $2 per ton, and in nearly every instance they were in fine, thriving condition.

I think, in regard to the matters above named, that Minnesota will compare favorably with Illinois or Iowa, in some respects better, and in some not so good; but it is particularly in reference to her climate, geographical position, scenery, pure water, and admirable distribution of those natural advantages for pleasant and profitable farming, that—as seems to me—she offers inducements to the farmer seeking a home in the West, such as no other Western State can present. Timber for building and fencing, if not for fuel, is a necessity. For profitable farming, prairie is *almost* a necessity also. Pure clear water is indispensable for comfort, and generally for health. A gently rolling country attracts the eye and pleases, so that its beauty alone gives it an additional value, aside from more perfect drainage, and therefore better adaptation for tillage; and a

healthful, bracing, and invigorating climate, alone is sufficient to make poor land rich and valuable. Convenience to market, and choice of many competing routes for transportation, make farming profitable and lands valuable. Within two years our markets should be equally good with Illinois, and better than Iowa, ultimately better than either; for we are on the shortest and best route across the continent. Especially, however, I would call attention to the fact that the climate of Minnesota is better, pleasanter, and more healthful, than that of either of the States named. We have neither the scourge of the West (intermittent fevers,) nor of the East (consumption,) except as they are brought here.

Lastly. No other Western State can show so large a per cent. of NATURAL FARMS, with meadows, and fields ready for the plow; fine groves of timber; beautiful lakes and streams; fine building sites; handsome views; and lacking only buildings and fences to make them models of perfect farms,—as can Minnesota.

In other words, the timber, meadow, prairie, water, and fine scenery, as well as fertile soil, are better *distributed* here, so as to afford a greater number of pleasant homes, than in any other of the Western States with which I am acquainted.

These are real and substantial advantages, which Minnesota possesses over the States south and east of her; and I am very sure that few persons who have carefully examined the question, and are really acquainted with the comparative advantages of the different States named, would willingly leave Minnesota for a residence in Illinois, Iowa, or Wisconsin. Very truly yours, GEORGE B. WRIGHT.

MINNESOTA COMPARED TO KANSAS, NEBRASKA, IOWA, AND ILLINOIS.—"Carlton," in July, 1869, writes the *Boston Journal:*

Many of those who, perchance, may read these lines have visited Illinois and seen the wheat and corn fields and cultivated lands of that State, reaching on and on in boundless expanse; have heard the music of the reapers gathering the ripened grain; have beheld the harvest fields in all their glory. Think now of those fields extended as far as it is from Boston to Omaha, over

a tract as wide as from Montreal to Philadelphia, and you have the area of the wheat field lying northwest of Chicago.

It is a region presenting features different from the country along the highway opened to San Francisco by the Union Pacific road. The plains of Nebraska and Kansas—magnificent in extent—are traversed by no great water courses. The streams are few, and when the summer heats prevail, they dwindle to rivulets, and become wholly dry; but here there are ever-flowing streams and lakes of pure fresh water, fed by never-failing springs. Ride where you will over this vast territory, and you are always in sight of a river, a creek, or a lake of purest water, where the waves break on pebbly beaches, and where thousands of waterfowl rear their young beneath the oaks and maples that fringe the rippling streams.

Beautiful as are the prairies of Illinois and Iowa, nature has been even more generous in her adornment of the Northwest.

Comparison with other Lands.—No other country has such a domain. The plains of Bavaria and Hungary, upon which Central Europe relies for its grain, united, would not exceed in area a single county in Minnesota. The fine lands of Prussia have a thin soil, while the wheat fields of France have been cultivated for centuries, and are only kept in heart by constant application of fertilizers; but here the soil is in its virgin state, yielding such returns as are not obtained in any other land, unless it be in the San Joaquin and Santa Clara valleys of California.

The most fertile acre of the Ganges Valley in India will not yield a greater return than these of the Northwest. The Nile and the Yangteze—their fertility renewed by each annual flood—may vie with the uplands of Minnesota; but there are sections along this Red River of the North—along the Cheyenne and Mouse rivers of Dakota—which are not surpassed by the richest in the heart of China or on the Delta of the Nile! * * *

Is this letter too enthusiastic? Will those who read it say "he has lost his head and gone daft out there on the prairies?" Not quite. I am an observer here, as I have been in other lands. I have ridden many times over the States of the Northwest; have seen the riches of Santa Clara and Napa west of the Sierra Nevadas; have looked out over the meadows of Yangteze and the Nile, and can say with honest conviction, that for one who

has had a home in New England, I have seen nowhere so inviting a field as that of Minnesota—none with greater undeveloped wealth, none with such prospect of quick development.

The Cincinnati Times on Minnesota Wheat.—The *Cincinnati Times*, speaking of the progress of wheat culture in Minnesota several years since, said:

While the wheat crop has been subject to great vicissitudes in other States, it has steadily kept up a full yield in the young and promising State of Minnesota, as appears in the following table:

	Acres in wheat.	Bushels harvested.	Proportion of tilled land in wheat.
1859,	124,792	2,374,415	34.45
1860,	231,915	5,101,432	53.88
1865,	400,000	10,000,000	62.00

The total crop of wheat in Ohio in 1864 was 15,541,825, which was produced on 1,655,595 acres. This shows a fraction less than ten bushels to the acre. The yield per acre in Minnesota was twenty-five bushels in 1865. Health and wheat are the first attractions in this upper State. Life and the staff of life are the chief productions.

The Actual Yield, and the Yield per Acre of Produce.—Gov. Marshall, in his message to the Legislature in 1869, gives the following statistics carefully collected by the Secretary of State from the somewhat imperfect returns of assessors and from other sources. He says: "these figures are rather under than above the facts."

Number of acres of corn, wheat, oats and potatoes under cultivation in 1866–7–8.

	1866.	1867.	1868.
No. of acres in wheat,	547,531	683,784	908,500
Total product of wheat,	7,921,441	10,014,828	16,125,875
No. of acres in corn,	88,183	100,648	115,170
Total product of corn,	2,056,747	3,216,010	4,598,760
No. of acres in oats,	187,023	162,722	174,500
Total product of oats,	4,372,477	5,620,895	6,103,510
No. of acres in potatoes,	16,297	17,647	17,500
Total product of potatoes,	1,851,696	1,788,053	1,698,900

WHEAT.—*Average Yield Compared with other States.*—This shows an average of wheat in 1866 of 14.48 bushels

per acre; in 1867, 14.64 bushels per acre; and in 1868, 17.75 per acre. In 1865, on an area of 400,000 acres, the enormous crop of 10,000,000 bushels was the yield (estimated in the Governor's Message,) being an average of 25 bushels per acre. In 1859, on 124,972 acres, 2,374,-415 bushels; average per acre, 19. In 1860, on 231,315 acres, 5,101,432 bushels; average per acre, 22.05. Mr. Wheelock says, "Illinois and Iowa do not yield from year to year one-third of this average. In an address delivered at the Wisconsin State Agricultural Fair in 1859 by Abraham Lincoln, President of the United States, he stated as the best result of all the testimony he was able to collect, that the average wheat yield of Illinois was not over 8 bushels per acre. Iowa in 1849 produced 14 bushels per acre; in 1856, $14\frac{1}{3}$; in 1858, but 7 bushels; and in 1859, but $4\frac{1}{3}$ bushels per acre. The largest known crop of Ohio, that of 1850, averaged only $17\frac{1}{3}$ bushels per acre, and the average yield of that State for the last ten years is but $12\frac{1}{3}$ bushels per acre."

MINNESOTA, THE BANNER WHEAT STATE.—The crop of Minnesota in 1868 exceeds the crop of 1860 in Pennsylvania, Wisconsin, Ohio and Virginia, is about double that of California, Iowa, New York, Michigan, Kentucky and Maryland, and about four times that of Missouri: Illinois and Indiana alone exceeding her, and Indiana by less than a million bushels. At the same rate of progress she will soon be the banner wheat State of the Union. With inferior implements, and less experience and skilled farming than the older States, the above average yields are most remarkable.

While these are the average yields, it is but fair to say that from thirty to forty bushels per acre are frequently raised, where the cultivation is good and the season favorable (see examples at the end of this chapter.)

Especially is this the case with winter wheat. And it is also proper to say that Minnesota has a much lower average than she should have, on account of the great number of slouchy, unskillful tillers of the soil, who are *not* farmers, but men who *never* farmed before they moved West. Shallow plowing, irregular sowing, deficient harrowing, careless and wasteful harvesting and threshing, together with too much reliance upon the rich soil and too little upon cultivation, rotation of crops, and good seed, are evils a thousand fold multiplied in Minnesota farming over what they are in the older States. To excel them all, even with these drawbacks, is a triumphant vindication of our great agricultural capacity.

Bushels of Wheat produced in 1860:

Illinois,	23,837,023	Iowa,	8,449,403
Indiana,	16,848,267	Michigan,	8,336,368
Wisconsin,	15,657,458	Kentucky,	7,394,809
Ohio,	15,119,047	Maryland,	6,103,480
Virginia,	13,130,977	California,	5,928,470
Pennsylvania,	13,042,165	Minnesota,	2,186,993
New York,	8,681,105	**Minnesota**, 1868,	**16,128,875**

Increase in production in ten years, from 1850 *to* 1860:

Illinois,	14,422,448	N. York (decrease)	4,440,393
Indiana,	10,633,809	Iowa,	6,918,822
Wisconsin,	11,371,327	Michigan,	3,410,479
Ohio,	631,696	Kentucky,	5,251,987
Virginia,	1,918,361	Maryland,	1,608,800
Penn. (decrease)	2,325,526	California,	5,911,242

Minnesota, from 1860 to 1868, **13,938,882** (eight years.)

Bushels of Wheat produced in 1867:

		Average per acre.
Illinois	28,000,000	14.5
Wisconsin	22,000,000	12.3
Ohio	18,000,000	11.6
Indiana	16,861,000	10.5
Iowa	16,300,000	12.7
Minnesota (1868)	16,128,875	17.75
Michigan	15,250,000	12.4
Pennsylvania	15,000,000	12.5
New York	8,250,000	14.5

We give the above figures as the latest, to show the present status of Minnesota among the great wheat growing States, how rapid has been her progress towards the head of the list, and how few years it will take at the same rate of progress to make her the *first* wheat growing State in the Union.

Corn.—Average per acre in Minnesota, 1866, 23.32 bushels; 1867, 31.95; 1868, 39.93. Mr. Lincoln, in the address before noticed, said: "The average corn crop of Illinois, from year to year, does not exceed 20 bushels per acre." Average of Minnesota, 1860, 35.67. "The average yield in Ohio for the last 6 years reported is 31 bushels per acre." (Wheelock's report, 1861.) The census of 1860 shows the average in Ohio, 36 bushels; Indiana, 33; Illinois, 33; Iowa, 32; Michigan, 32; Wisconsin, 35; Pennsylvania, 20; New York, 27.

Though corn is the most delicate of the cereals, and most liable to injury from frost, Whittlesey, in his official report, says: "I have seen corn growing at Red Lake, in latitude 48° north, which produced thirty bushels to the acre." Owen's report speaks of flourishing corn fields at the same place, and at Cass Lake, and good crops raised by the Indians and missionaries.

Hind's report on the Sascatchewan, speaking of the Red River climate, says: "It cannot fail to be noticed, however, that the general absence of late spring and early autumn frosts, with an abundant fall of rain during the agricultural months, are its distinguishing features in relation to husbandry. The melon growing in the open air, and arriving at perfect maturity in August and September; Indian corn succeeding invariably, where due precautions are used to ensure the ripening before the middle of September, are strong proofs of the almost uniform absence of summer frosts."

This testimony relates to a more northerly and colder latitude than Minnesota. Our actual product of 4,598,760 bushels of corn, in 1868, is a sufficient answer to the question whether we are too far north for corn.

As there is much incredulity on this subject in other States, and it is important in its bearing upon our capacity for stock growing, the following figures are added to fortify the above facts. Blodget says, "The extreme limits of Indian corn northward are defined by the isothermal of 67° for July, and it may go a little beyond 65° for the summer, one month, however, being required of a higher mean than this."

Minnesota has 73°4 for July, and 70°6 for the summer, and compares thus with Chicago and other points, according to Blodget's climatological tables, and the Army Meteorological Register.

MEAN SUMMER HEAT.

St. Paul, Minn.	70°6	New York City,	71°3
Lancaster, Penn.	71°2	Stubenville, Ohio,	71°1
Philadelphia, Penn.	70°8	Chicago, Ill.	67°3

MEAN OF EACH MONTH.

	April.	May.	June.	July.	Aug.	Sept.
St. Paul,	46.3	59.0	68.4	73.4	70.1	59.0
Chicago,	46.0	56.3	62.7	70.7	68.5	60.0

It thus appears that we compare favorably with the best corn-growing States in the matter of climate as well as in our yields. The past summer (1869) was one of the coldest and most backward we ever had. May and June were the coldest, except two, for ten years, and July 9° colder than July, 1868; the mean of May being 57°65, June 64°41, July 69°73, August 68°38, the summer mean 67°50; and yet we have raised a good fair crop of corn, the first frost occurring on the night of September, 26th, after the crop was generally fully matured and safe.

"Let it be remembered that the growing season of Minnesota is exempt from long, cold storms; that it is less liable than are the States of Ohio and Illinois to the ravages of late spring and early autumnal frosts; and further, that its high northern latitude gives it a day of sixteen hours, when the latitude of New Orleans has but fourteen; whilst the nature of the soil scarce admits of the radiation of heat during the short nights that intervene between the long days of bright, cloudless sunshine. These characteristics of climate, combining remarkable richness and fertility of soil, render Minnesota superior to many, and equal to most of the States of the Union as a corn-producing State."*

OATS.—Average per acre in Minnesota, 1866, 23.37 bushels; 1867, 34.54; 1868, 34.97; 1859, 33.9; 1860, 42.39; 23 counties, 1865, 44; Ohio, 1864, 29; Indiana, 26; Illinois, 31; Wisconsin, 27; Iowa, 32; Missouri, 25.

POTATOES.—Average, 1866, 113.62; 1867, 101.32; 1868, 97.08; 1859, 115; 1860, 138; 23 counties, 1865, 150; Ohio, 1864, 95; Indiana, 80; Illinois, 81; Kentucky, 81; Missouri, 39; Wisconsin, 118; Iowa, 76; Michigan, 79; Kansas, 43,

BARLEY.—Average, 1859, 29.1; 1860, 33.23; 1865, 23 counties, 30; Ohio, 23; Indiana, 24; Illinois, 22; Kentucky, 23; Missouri, 13; Wisconsin, 21; Michigan, 19; Kansas, 23; Iowa, 21.

RYE.—Average, 1859, 19.4; 1860, 21.56; 1865, 23 counties, 17½; Ohio, 1864, 12; Indiana, 19; Illinois, 15; Wisconsin, 12; Iowa, 15; Missouri, 15.

BUCKWHEAT.—Average 1859, 6.05; 1860, 15.73; 23 counties, 1865, 23; Ohio, 1864, 17; Indiana, 18; Illinois, 17; Wisconsin, 16; Iowa, 17; Missouri, 15.

SORGHUM.—Average, 1860, 72½ gallons per acre; 1865, 23 counties, 851 acres averaged 75 gallons per acre.

* Prize Essay of Mrs. Mary J. Colburn.

HAY.—Average per acre, 2½ tons (see "Natural Meadows," page 21.) Ohio, 1⅓ per acre. Cost of saving by patent mower, $1 to £1.50 per ton.

TOBACCO, 1859, 38,938 lbs. HEMP, 109 tons. FLAX, 1983 lbs. MAPLE SUGAR, 379,669 lbs. Maple molasses, 23,038 gallons. Sorghum molasses, 14,178. HONEY, 34,-285 lbs. RICE, 3286. Butter, 2,957,673. Cheese, 196,-314. Peas and Beans, 18,988 bushels. Sweet Potatoes, 792 bushels.

These figures are from the official reports of the U. S. Commissioner of Agriculture, and other official sources.

We might multiply them and give higher yields, but they are sufficient to show that Minnesota compares favorably with the best agricultural States in the Union.

STOCK GROWING.—Our people pride themselves upon our pre-eminence as a stock-growing country, in the following particulars:

1st. The healthiness of all stock—sheep, hogs, horses, and cattle—a most remarkable pre-eminence.

2nd. The luxuriance and nutritious qualities of our grasses and natural meadows,—including blue grass equal to the best Kentucky, also white and red clover—the abundance and cheapness of hay more than compensating for the long winter—the only drawback. See "Natural Meadows," page 21, showing facts on this subject—also page 36. The haying season lasts from 75 to 90 days.

3d. The small capital required. A man with capital to stock a farm with young stock, can make more money in Minnesota in proportion to his capital than in any of the older States, where land is high and ten times the amount must be invested in the land.

Here the land is free, the pasturage free, running streams and lakes free, the hay free—costing neither

plowing, planting, nor fencing, and the stock free to roam at pleasure.

4th. The high prices to be obtained. All the Forts west to be supplied, and the growing and ever-coming immigration keep prices high: beef on foot ranges from 5 to 8 cents; oxen, $125 to $175 per yoke; horses, $100 to $300; hogs, 10 to 13 cents, dressed; sheep and wool temporarily set back by unfriendly congressional legislation. For amount of live stock in Minnesota see page 27.

DAIRY BUSINESS.—Cheese wholesaling at 15 and 20 cents, and butter retailing at 30 to 45 cents—the same abundance of grass, pure water, &c., makes this a profitable branch of husbandry.

A Wisconsin paper says: "A gentleman living near Kenosha, last season, with the milk of seventy cows, made 40,250 lbs. of cheese—556 lbs. per cow. Which at 16¼ cents per lb. (the average price last year) amounted to $6576.10, or $93.93 per cow—the cows being worth perhaps $4200."

Minnesota farmers estimate the cost of keeping a cow at $12.50 per year; her milk at 300 gallons, equivalent to 300 lbs. of cheese; and the whey and butter $10 more. Good cows in the spring are worth $30 to $45.

There are already quite a number of large dairy establishments in the State, and more preparing to begin.

Hon. James W. Taylor, of St. Paul, writes Robertson's *Monthly* for October: "A gentleman just returned from a careful exploration of the celebrated dairy districts of Northern New York and Vermont, expressed a confident opinion that nine-tenths of the route from St. Paul to Duluth will be occupied for the production of butter and cheese—staples which are destined to great prominence among our exports to Europe, and which will seldom be in excess of a remunerative domestic demand. * *

"In the same direction, although with a wider range, is the enterprise of an English gentleman, W. Thomas Emsly, who has purchased 4000 acres near Rush City, and made arrangements for a stock farm. His purpose is to import cattle and sheep of the best blood.

"If the dairy is destined to be the leading interest of North-eastern Minnesota, we can readily anticipate a dense and permanent population—always an incident of that form of agricultural industry."

WINTERING STOCK.—Sheds made of straw are generally built by farmers, and all stock thrives better by protection during what are called the "cold snaps." This is no more true in Minnesota than elsewhere. And the dryness of our winters makes it little if any more necessary to house here than in milder but rawer and chillier latitudes.

Stock generally runs out during the day time, and some farmers, who have tried closely housing them, claim that they thrive as well, if not better, to take the open air night and day.

Except the working stock, sheep, and hogs, stock are wintered on hay, straw, and fodder only, and keep in good condition. Young colts thrive well for three years on such feed. Working cattle are fed on turnips, or ruta bagas occasionally, or a little corn.

RUTA BAGAS are raised either on the sod or old land, planted as late as July 12th, and yield hundreds of bushels to the acre. Some estimate as high as 600 to 1000 bushels per acre.

CORN FODDER is raised by sowing the corn broadcast or drilling, and from four to eight tons per acre may be gathered.

CLOVER, TIMOTHY, AND BLUE GRASS flourish, and the best of "blue joint" grows on the prairie without culture.

THE PROFITABLENESS OF FARMING IN MINNESOTA.—Our large yields will be worth little to us beyond affording an easy living, unless we have commercial advantages for marketing at remunerative rates. Our rivers, lakes, and railroads will be shown in the proper place to give us these advantages.

Before coming to them, hear what Major-General G. K. Warren, who was engaged last year in surveying the Upper Mississippi, says in his official report of October, 1868, in response to a resolution of Congress requiring "a full statement of the facts tending to show how much commerce would be promoted by certain works of improvement."

Extract from General Warren's report:

The region of the Upper Mississippi is pre-eminently adapted to the production of wheat; and the low price at which land can now be purchased, and the ease with which it can be tilled, make wheat growing one of the most profitable of pursuits. The present year, upon farms well conducted and situated conveniently to water transportation, wheat has averaged about twenty bushels per acre, and sold for about one dollar and a half per bushel, realizing thirty dollars to the acre, and at a cost of production of about ten dollars, leaving a clear profit of twenty dollars per acre. A farm of two thousand acres would, at this rate, make a clear profit of forty thousand dollars. This would be sufficient to take up another equally large piece of land, break it, stock it and fence it, and show a profit of one hundred per centum on the original investment. Under such a stimulus as this, it is easy to see how rapid must be the expansion of the area of land cultivated for producing wheat.

Large Farms.—Capitalists turning Farmers.—Pennock Pusey, Esq., Assistant Secretary of State, in response to a request from the *Chicago Post*, writes that paper some particulars of the farming operations of Oliver Dalrymple, Esq., about twenty miles from St. Paul.

On three farms of 2000 acres, 1700 were in wheat. His yield in 1867 was 35,700 bushels, gross price $53,550, profits $14,500; 1868, yield 39,000 bushels, nett profits $20,400. His profits would have been larger, except for the extremely high prices which ruled in 1866—seed wheat costing $2.50 per bushel, with corresponding disbursements for first breaking and other expenses. These expenses include interest on the capital employed in land and otherwise. "The original cost of the land averaged about $12 per acre; so that after allowing amply for the expenses of building, fencing, and other improvements, the nett profits on two years' crops were more than sufficient to cover the whole, while the market value of the land and improvements is to day nearly or quite three times its first cost.

Mr. Dalrymple was so well satisfied with two years' trial, that he continued in 1869.

The *Stillwater Republican* says he has 2000 acres in wheat, besides other crops, "which with a good yield will give him 50,000 bushels. Last season, Mr. Dalrymple employed one hundred men and a hundred horses in harvesting and threshing his crop. His farming operations, although yet in their infancy, have made him a fortune, and enabled him to extend his operations from year to year. Mr. Dalrymple has demonstrated the wealth and value of Minnesota lands, and the fact that capital and business ability can be successfully employed."

J. W. Paxton's Mammoth Farm.—The special reporter of the *St. Paul Dispatch* says of this farm, located near Redwood Falls, far up the Minnesota Valley:

> One of the prominent features of Redwood is the "Paxton Farm," four or five miles south-east of the place. It is owned by J. W. Paxton, late of St. Paul, a very enterprising gentleman, and one of the best citizens of the place. There are 1000

acres under cultivation, and it is designed to "break up" almost the entire portion of the 8000 acre tract as soon as possible. Mr. Paxton has, all told, upward of 15,000 acres of land in this vicinity, with enough timber to give each purchaser a sufficient tract of wood land to supply the demand for building, fencing, &c. He is preparing to set out soft maple and cottonwood groves on different parts of his lands, which in the course of four or five years will afford excellent protection against the wintry blasts. From the valley of the Minnesota he is having a large quantity of soft maple seeds gathered, with which to plant the low lands and meadow lands. He is also preparing to build a large number of farm buildings on his premises, to let to persons desiring to cultivate portions of the land on shares. This will be a great convenience to farmers of limited means, who will thus be enabled to select "claims," and by renting cultivated land any person can acquire sufficient capital to equip his own farm quite comfortably.

Hon. Clark W. Thompson, of the Southern Minnesota Railroad, has a farm of 9000 acres in one body near Wells, in Faribault County, which he is dividing into farms of 160 acres, with a brick house on each 100 acres broke and fenced, to be leased to parties on such terms as will make it an object to them to abandon the idea of going "out West" to make a homestead claim.

Captain W. F. Davidson's Farm.—This gentleman, the president of the North-Western Union Packet Co., has purchased a tract of several thousand acres of land in Redwood County, with a view to the prosecution of farming operations on a large scale.

Governor Marshall's Farm.—Governor Marshall and Major J. H. Donaldson have a farm of 2200 acres in Mower County, with 1000 acres in wheat this season.

They have this season made a large purchase near St. Cloud.

Mr. S. Jenkins's Farm, near Lakeville, Dakota County, twenty miles from St. Paul, containing 800 acres was

offered for sale last year with the growing crop and all utensils and machinery for $40,000.

Still Another.—The *Mower County Transcript* (Austin) says:

Messrs. F. P. Stearns, C. C. Wilson, and Charley Morton, all monied men of Rochester, have just purchased some three thousand acres of land in the town of Waltham, including the whole of sections 17 and 18, parts of 19, 20, and 21, for $4.75 per acre. This is a splendid tract of land, and we are glad it has passed into the hands of men able and willing to cultivate it.

PROFITS OF SMALL FARMS:

Mr. Jonas Burrill gives us the exact amount of produce raised by him this year on less than twenty acres of land. He claims that in general farmers pretend to cultivate a large number of acres with as much ease as they can a smaller number, and in that they are much mistaken, as his experience in this matter will prove—that there is a general neglect in the proper building up and sustaining the soil by giving it plenty of manure and thereby enriching its qualities. He says that from ten acres he raised 310 bushels of all No. 1 wheat, or 31 bushels to the acre; that four acres produced 260 bushels of oats, or 65 bushels to the acre; that from five acres were raised 593 bushels of corn, or 118 3-5 bushels to the acre; and lastly 60 bushels of carrots were produced on five rods of ground one rod wide.—*Mankato Union.*

As an evidence of what men can do where they have a will to work, we will refer to Andrew Barlow, of Bancroft, who, thirteen years ago last October, landed in New York city from the old country, and was compelled to leave his family for want of means to get them West. Working his way out himself, as best he could, he accumulated enough during the winter to send for them in the spring. With industrious habits and good management he is now able to make a show of 320 acres of excellent land, 50 of which are in crops for the present year, and 30 more under contract for breaking; a barn which cost $800; a

house which cost $1000, besides having his farming implements, including an interest in a threshing machine.—*Freeborn County Standard.*

Another Instance.—Ten years ago this fall, the writer bought the "claim" of Peter Legro, near Lakeville, for $100. With this meagre sum, Mr. Legro, with a wife and five children, a wagon, plow, and *one ox*, with a hard winter before him, he made his way to Stearns County, near Paynesville, nearly eighty miles north, made his "claim," and in the spring planted according to his limited means. A few weeks ago he informed me that he could sell his farm for $5000. Having stock and utensils also, and a good store besides, he is independent.

He thanked the writer for the advice which dissuaded him from going back to Michigan, where he was offered land to "rent" on favorable terms by a brother. To show that notwithstanding this rise, it is not too late for similar speculations by other poor men, here is—

Still another in the same County.—The *St. Cloud Journal* says last fall J. A. Casler, of the Minnesota House, took a homestead on the east side of the river, some sixteen miles from St. Cloud, in the timber, and put up a shanty worth about $100. This spring he sold his homestead right in the tract for $600.

One more.—Frederick Hilderbrand writes Robertson's *Monthly* his experience with a twenty-seven acre farm near St. Paul, which he purchased over two years ago, in a wild state. He had been a mechanic in the city, knew nothing of farming, but went into it as the only escape from early death. He says, "I have farmed this land two years—only part in cultivation. It pays. Here is the result for the first year. First, we have had our living, except clothing and groceries, from the farm. We sold butter to customers to the amount of $769.60. This was

the product of eight to nine cows. We sold eggs and chickens for $176 and pork and garden stuff for $330; making in all $1269 cash income; and paid out in expenses for the help of a man on the farm, and a girl in the house, about $300. Myself and wife, both being in poor health, have not done much work—and no hard work. We have depended almost entirely upon hired help, but I have always looked closely after my business and directed the work."

A Minnesota Farmer writing to the "Hearth and Home," says: "A man rented 160 acres of newly-broken prairie land near me last spring, and got but one-half the crop; but with that he paid $2000 for the land, and now owns a farm upon which $4000 worth of grain was raised this year (1868) with wheat at but little over $1 per bushel."

COST AND PROFIT OF RAISING WHEAT PER ACRE.—Forty acres, estimated by an economical farmer. Plowing an acre, $1.50; seed, at $1.25 per bushel, $2; seeding, 60 cts.; hand and team, five acres per day, at $3; reaping, $1; binding and setting, $3.20 (6 hands 6 days, at $3, and $3 per week for board;) stacking, $1.12½ (hands and team 6 days;) help threshing, $1.35 (8 hands 2 days, 2 span horses extra, board of hands and teams 2 days;) threshing machine expense, $1 (5 cts. per bushel.) Total cost per acre, $11.02. Value of product, at $1.25, $25; profit per acre, $13.98, besides good wages for the farmer and his teams. The estimate for binding is twice as high as it ought to be, according to other authorities. The price is the average for five years past. The yield is the general Minnesota average.

EXTRA YIELD OF WHEAT AND OTHER CROPS.—The *Mankato Review* says that on the farm of Samuel M. Walker, a four-acre field of winter wheat yielded this

season 178 bushels—44½ bushels per acre. Spring wheat averaged 28 bushels per acre, and oats 60 bushels.

The *Northfield Enterprise* says Mr. John Simpson, of Waterford, raised this season 112 bushels of wheat, machine measure, weighing 62 pounds per bushel, from four bushels of club wheat recently brought from Canada.

Albert Knight, of St. Peter, threshed 63 acres of wheat, yielding 2010 bushels No. 1—averaging 32 bushels to the acre.

Mr. Stephen Eldridge, of the town of Homer, in this county, has just threshed four acres of wheat, which yielded 160 bushels—40 bushels to the acre. This wheat was the Golden Drop variety, sown on last year's breaking, and if anything can beat it the man is invited to step forward.—*Winona Republican.*

F. C. Maltby, of Minnetrista, has harvested his field of winter wheat, and the same has yielded, by thresher's measure, 40 bushels to the acre. A neighbor of Mr. Maltby had a field of about ten acres of the same kind of wheat, and nearly as heavy a yield. The spring wheat of that town will average this year not less than 28 bushels to the acre.—*Minneapolis Tribune.*

The *Mower County Transcript* (Austin) says Mr. G. Robinson threshed 887 bushels of wheat from 25 acres—35½ bushels per acre.

Large Yield of Oats.—Mr. Aiken Miner, of Jackson, raised this year on 40 acres of ground, 2900 bushels of oats, by measurement—the same being 3200 bushels by weight. Eleven and one-third acres of the same field of oats, threshed separately, averaged 106 bushels per acre. The land was measured by G. C. Chamberlin, and the measurement of the grain was witnessed by Hon. J. B. Wakefield, Hon. E. P. Freeman, Major H. S. Bailey, Dr. C. P. Morrill, and C. L. Hecox. Mr. Miner claims the

belt for the largest yield of oats to the acre in the State. —*Blue Earth City Post.*

Wheat and Oats.—A correspondent of the *Pioneer* writes from Shakopee, Scott County: "Facts have been gathered, however, sufficient, I think, to warrant the statement that wheat will average twenty-five bushels per acre in this county, and perhaps more. B. P. Squires, of Spring Lake, last week threshed the wheat from 36 acres, which yielded 1050 bushels, and another piece of 13 acres, yielding 404 bushels. Reports from other quarters show a yield fully equal to the above.

"It is believed that oats will average about 60 bushels per acre. Some pieces have been threshed which have come up to over 70 bushels per acre. I can soon give you a statement which will be more satisfactory."

It is too soon to hear of many cases of heavy yields this season (it is now October 4th,) the extraordinarily wet weather and floods of September—over ten inches of rain—having delayed threshing. The corn is still in the field, so we have no instances of this crop. We have simply clipped the above from the papers at random for several weeks past, and have not taken other years, which might give heavier yields, and more than we have room for. We will just add one which meets our eye in Robertson's *Monthly*, of May, 1869.

John Rollins, of St. Anthony, writes that in the spring of 1868 he planted the Golden Drop variety of wheat, and obtained 41 measured bushels per acre, although it was harvested late and shelled badly. Except for this, he estimates the yield would have been 50 bushels per acre. On another field, which had been cropped in wheat twelve years, except a portion in corn one year, he raised 27 measured bushels, with the same drawbacks of shelling and late cutting. It is safe to say that with good

farming and good seed, there is little difficulty in securing these extra yields year after year. It is the slouchy farming which makes our *average* only 18 to 22 bushels, and some years lower. Flax and clover seed are being largely and profitably raised by some of our farmers, but we have no statistics of special yields at hand.

(See report of this year's crop in closing pages of Part First.)

CHAPTER IX.

MINNESOTA RAILROADS, RIVERS, AND MARKETS.—HER COMMERCIAL ADVANTAGES.

Lake Superior, the Mississippi and other Rivers, and our Railroads, bring us as near to the Eastern and Southern Markets as Iowa, Illinois, or Wisconsin.—Pope, in his official report (1849) recommends grants of land for railroads from Red River to Lake Superior, and from Red River to the Minnesota River.

As his recommendations have now almost become accomplished facts, we give his comments on the advantages of these roads.

"I regard it as not at all more difficult to deliver the produce of this whole country at the western extremity of Lake Superior, than it is to deliver the produce of the interior of Wisconsin or Illinois at any point on Lake Michigan. The distance from Buffalo, New York, to Chicago, is little less than to Fond du Lac, and in open steamboat navigation would be of little consequence. This line of railroad, therefore, to connect the head of

navigation of the Red River of the North with Lake Superior, could be easily built by the appropriation of the alternate grants of land, and would enable Minnesota to compete in the Eastern markets with Illinois and Wisconsin. The second route, from the head of navigation of the Red River to the head of navigation of the St. Peter's, would open the valleys of the Red River and of the St. Peter's to the Mississippi, below the Falls of St. Anthony, and would bring both these valleys quite as near to the Southern market as the interior of Iowa, Wisconsin and Illinois."

Water Communications.—He further reported: "The peculiar conformation of the whole region of country between the Minnesota, Mississippi and the head of navigation of the Red River of the North, and the water communications, remarkable not only for their great number but for their almost unlimited extent, will enable the farmer and manufacturer to transport to Lake Superior or the Mississippi River, all his supplies, produce and articles of manufacture in one-fourth of the time, and at one-twentieth of the expense, that the same amounts could be carted from the interior of Illinois, Iowa, or Wisconsin, to any navigable stream. In point of time and expense (the two great considerations,) Minnesota has equal advantages at least with the interior parts of the States above mentioned."

Major-Gen. G. K. Warren, in his report recommending the improvement of the Fox and Wisconsin rivers, so as to connect the Mississippi River with Lake Michigan, says: "We believe it is safe to say that a good line of water transportation from the Mississippi to Green Bay can be so built as to profitably transport at one-half cent per ton per mile. The line would be two hundred and eighty miles long, and this would make the cost of the

entire distance one dollar and forty cents per ton, a saving of one dollar and ninety cents per ton upon the cheapest railroad transportation, and on the present wheat crop would save, upon what the railroads now charge, three dollars and forty cents per ton, or, in the aggregate, three million seven hundred and eighty thousand dollars."

This improvement was urged by the Legislatures of Iowa, Wisconsin, and Minnesota, and by a Canal Convention, held at Prairie du Chien, Nov., 1868, and will ultimately, like Pope's railroads, become an accomplished fact.

The railroads now charge $5 per ton to transport wheat from the river to Lake Michigan. This improvement, according to Warren, would reduce it to $1.40. This would reduce the freight on wheat about eleven cents per bushel, and add the same amount to the price. His estimate of the cost is thus given in the Governor's Message, January, 1869: "Gen. Warren estimates, from careful surveys, (1,) that an expenditure of $427,749.37 will secure three feet low-water navigation for steamboats in the Wisconsin River; (2,) that *four feet* depth of navigation at low water, part river and part canal, can be obtained at a cost of $3,206,790; (3,) that *five feet* navigation, canal and river, can be secured at a cost of $4,164,270."

The Governor adds: "It is ascertained from reports and tables carefully prepared, that the average net cost of transportation by railroad of a ton of freight per mile, is *eighteen* mills. It is also ascertained that the average net cost of transportation by canal is from *four* to *six* mills per ton per mile, showing that the cost of canal transportation is but about *one-third* the cost of transportation by rail."

In the mean time, while this improvement is yet to be secured, we already have Lake Superior almost connected with the Mississippi by rail.

Lake Superior saves us 882 *miles, and brings us as near the New York market as Chicago.*—The St. Paul & Superior Railroad being now virtually an accomplished fact, its bonds, amounting to $4,500,000, having been cashed, and its construction to be finished in 1870, the remarks of Mr. Wheelock, in his official report (1861) upon the advantages of this connection, are interesting and encouraging. He says:

> In my former report it was shown by an analysis of the comparative cost by water and railroad, that the frontage of Minnesota on Lake Superior is equivalent in a commercial sense to *a decrease of the distance from New York, measured upon railroad lines, of* 882 *miles*—that is to say, the difference in the cost of transportation in favor of the water route would pay the freight upon her products from her central districts for that distance. In other words, her water communications place her interior districts on a par, commercially, with States depending upon railroad outlets, which are only 442 miles from New York: for example, with Southwestern Pennsylvania and the Upper Ohio Valley. By this channel, therefore, when Minnesota shall have built a railroad to Lake Superior, *it will cost no more to ship a bushel of wheat from Red Wing than from Pittsburgh.* But to compare the commercial effect of this position with other States having a frontage on the lakes, the result is quite as favorable to Minnesota. A vessel on her way from Buffalo to Chicago for a load of grain, at a distance of 60 miles before she enters the Straits of Mackinac, is at the entrance of Lake Superior, and almost as near Fond du Lac as Chicago. The distance by water from New York to Chicago is 1428 miles, from New York to Fond du Lac 1510, or only 85 miles further, an inappreciable difference in transportation by water—so that as an absolute physical fact, *Minnesota is as near New York by water as Illinois.*

THE GENERAL EFFECT OF OUR RAILROADS.—ILLINOIS WITH AND WITHOUT RAILROADS.—ANECDOTE OF PROF. MITCHELL, THE ASTRONOMER.—DISTANCE CONQUERED.

At the celebration of the completion of the St. Louis and Cincinnati Railroad, Professor Mitchell, of Cincinnati, thirteen years ago, said: "Well do I remember a family with whom I passed a night in my early explorations on the banks of the Little Wabash. On all sides of their cabin stretched the rich and boundless prairie. The fertile soil yielded abundant return for the labor of the hard-working husbandmen. But alas! the crops were even but partly gathered and a sort of dependent gloom rested on the brow of the sun-bronzed farmer. 'Why don't you gather your corn,' said I. 'What's the use,' was the reply, 'we have gathered and cribbed more than enough for our own use. It is utterly impossible to reach a market. There is no one to buy, and we have no inducement to labor. Our sons and daughters are growing up around us in ignorance. The turnpike road has failed; the State works have failed; and now the last ray of hope has been kindled by the talk of a great railway from Cincinnati to St. Louis. We have enough of everything: all we want is an outlet. But there seems to be no chance and we are slowly sinking into gloom and despair.'" And yet, says Mr. Rawlings, author of "America, from the Atlantic to the Pacific," to whom we are indebted for the above, from that very region of country, which Prof. Mitchell referred to so short a time since, the report of the Secretary of the Interior of the United States for 1864 proves that there passed, bound to the Atlantic coast, over $50,000,000 worth of freight for the year ending 1863; and that very farmer, who complained of his poverty, is now one of the largest graziers in the State of Illinois.

THE FUTURE COMMERCIAL IMPORTANCE OF MINNESOTA.—The *New York Post* says: "There is a remarkable peculiarity in the local position of Minnesota with reference to the future commerce of the world. The steam navigation of the two great internal channels of the continent, the rivers St. Lawrence and Mississippi with the great lakes, terminates in Minnesota, and there meets the

Northern Pacific Railroad from Puget's Sound, the shortest thoroughfare between Europe and Asia. When that road is completed, the whole trade of those water lines will break bulk in this neighborhood, and make the State the entrepot and point of distribution of a commerce whose extent cannot now be calculated."

The Hon. Wm. H. Seward said, in a speech delivered at St. Paul in 1860:

I find myself now for the first time upon the highlands in the centre of the continent of North America, equidistant from the waters of Hudson's Bay and the Gulf of Mexico—from the Atlantic Ocean to the Ocean in which the sun sets. Here upon the spot where spring up, almost side by side, so that they may kiss each other, the two great rivers, the one of which pursuing its strange, capricious, majestic, vivacious career through lake, cascade, and river rapid, and lake after lake, and river after river, cataract and bay, and lake and rapids, finally, after a course of 2000 miles, brings your commerce half-way to Europe; the other, after passing through highlands and prairie a distance of 2000 miles, taking tributary after tributary from the East to the West, bringing together waters from the western declivity of the Alleghanies, and from those which trickle down the eastern side of the Rocky Mountains, finds its way into the Gulf of Mexico.

Here is the place—the central place—where the agriculture of the richest region of North America must pour out its tributes to the whole world. On the east, all along the shore of Lake Superior, and west, stretching in one broad plain in a belt quite across the continent, is a country where State after State is yet to arise, and where the productions for the support of human society in other old, crowded States must be brought forth.

This is then a commanding field; but it is as commanding in regard to the destinies of this country, and of this continent, as it is in regard to their commercial future; for power is not permanently to reside in the East, the eastern slopes of the Alleghany Mountains, nor in the seaports. Seaports have always been overrun and controlled by the people of the interior, and

the power that shall communicate and express the will of men on this continent is to be located in the Mississippi Valley, and at the sources of the Mississippi and St. Lawrence.

In our day, studying perhaps what might have seemed to others trifling and visionary, I had cast about for the future and ultimate seat of the power of the North American people. I had looked at Quebec, New Orleans, at Washington and San Francisco, at Cincinnati and St. Louis; and it had been the result of my conjecture that the seat of power for North America would yet be found in the Valley of Mexico, and the glories of the Aztec capital would be surrendered, in its becoming ultimately, and at last, the capital of the United States of America. But I have corrected that view. I now believe that the ultimate last seat of government on this great continent will be found somewhere within a circle or radius not very far from the spot on which I stand, at the head of navigation on the Mississippi River.

The Vast Fertile Areas West and Northwest of Minnesota, and their Bearing on Minnesota.

The Fertile Belt and the North Pacific Railroad.—The popular idea that Minnesota is the extreme verge of future population and prosperity, northwestward, is a popular error.

"North of the latitude of Milwaukee, and west of the longitude of Red River, Fort Kearney and Corpus Christi; or to state the fact in another way, east of the Rocky Mountains, and west of the 98th meridian, and between the 43d and 60th parallels, there is a productive cultivable area of 500,000 square miles, which is perfectly adapted to the fullest occupation by cultivated nations. West of the Rocky Mountains, and between the same parallels, there is an area of 300,000 square miles."

Another Illinois beyond Minnesota.—The majority report of the Committee of Congress on the Pacific Railroad, February 19th, 1869, says: "There are between Lake Superior and Puget Sound and the mouth of the Columbia

River 500,000 square miles of territory, upon the larger portion of which the United States government can impress the prosperity, wealth and power of Illinois. It is the winter-wheat region of this continent; a region of alternate prairies and pine forests, rich in coal, iron, gold, silver, and copper; the salubrity of whose climate has made it the sanitarium for consumptives from the Atlantic slope; whose Rocky Mountain section, broken down on its formation so as to be passable by loaded ponies, is blessed with a temperature so mild that countless herds of cattle range and fatten through the winter upon the natural grass within ten miles of the summit; in all whose valleys peaches, apples, pears, plums, cherries, grapes, and sweet potatoes have rapid growth and complete maturity; so rich in grass and so blessed in climate, that it has ever been the home in winter, as well as summer, of the buffalo, the elk, and the antelope. It has timber, water power, and stone. It has a population of 1,410,000 people. Illinois possessed no such endowment. Her inheritance, so amazingly developed by railroads, was a garden soil, deeply underlaid with a thin seam of coal and deposit of friable sandstone. She had nothing else."

The Fertile Belt is thus described by Mr. Rawlings, author of "America, from the Atlantic to the Pacific," (published in 1865:) "The Valley of the Sascatchewan contains an extended belt of land, called the 'Fertile Belt,' which is unsurpassed for the richness of its soil and its adaptability for agricultural purposes. The explorations of Simpson, Hind, Palisser, Hector, Sullivan, and Blakiston all serve to prove that within British territory the most fertile soil west of the Mississippi exists; and that so vast, so rich is this great valley, that it is capable of subsisting 20,000,000 people."

Dr. Cheadle, the English writer quoted elsewhere,

under the head of "Minnesota as a Farming Country," says: "North of latitude 49° is *another Minnesota*. It has the same mixed or park-like character—prairies and lakes, woods and streams. This extends from the Red River settlement almost to the base of the Rocky Mountains, or nearly 1000 miles in length and almost 100 miles wide."

Products of the Fertile Belt.—He says: "Wheat grows at Fort Garry, at the eastern end, and with equal luxuriance at Edmundton, 800 miles distant, near the western end, yielding thirty to fifty bushels per acre, and in some instances more. The root crops I have never seen equalled in this country. Potatoes get to immense size, and yield enormously. Turnips often attain a weight of sixteen or seventeen pounds apiece. Flax, hemp, and tobacco all grow well; all the cereals appear to flourish equally well. * * The herbage of the prairies is so feeding, that corn is rarely given to horses or cattle. They do their hard work, subsist entirely on grass, and are most astonishingly fat. The draught oxen resemble prize animals at a cattle show."

Climate of the Fertile Belt.—"The climate is that of Canada, or perhaps rather milder. The summer is long and warm, the weather uniformly bright and fine, with the exception of occasional showers. *A wet day is almost unknown.* The winter is severe, and unbroken by thaw, but pleasant enough to those able to house and clothe themselves warmly."

The Fertile Belt and its Destiny.—Climate, Coal Fields, and future Cities.—Compared with similar latitudes in Europe.—Pacific Railroad.

"Carleton," correspondent of the *Boston Journal*, writes August, 1869:

Open at the map of North America or of the country west and northwest of Lake Superior.

You see that the boundary between the United States and the British Possessions is the forty-ninth parallel. Now turn to the map of Europe. You see that the same parallel runs near Paris, right through that valley of the Rheims where the champagne grapes are grown. The vineyards of the Rhine are north of it. England, Scotland, Ireland and the largest half of Europe, all are farther north then the northern boundary of the United States. All the testimony of those who live in Minnesota, as well as those who have hunted buffalo on the Sascatchewan or trapped beaver on the Mackenzie River, shows that the climate of the Northwest is essentially that of Middle and Northern Europe.

If in the old world such cities as London, Paris, Berlin, Dresden, Prague, Moscow, Stockholm and St. Petersburg can rise north of the 49th parallel, why may there not be great centres of civilization in the Northwest? So far as climate is concerned, what is there to hinder?

We know already the wonderful productiveness of Minnesota. I have been far enough west to know that the fertility extends to Dakota. There is no portion of the country surpassing that of the Red River Valley for richness. Canadian explorers, travelers, trappers, Prof. Hind, of the Scientific Survey, all assure us that on the Assiniboine, the Sascatchewan and in the British possessions as far north as the Athabasca and Mackenzie rivers, the soil has the same characteristic of fertility.

Let us start now on a journey to the far Northwest. We are at St. Paul, so near latitude 45 that we may say we are on that parallel. It is the latitude of Venice and of Southern France. St. Paul is a little south of the parallel and so is Bordeaux. We travel northwest four hundred and fifty miles to the boundary between the United States and the British possessions, before we reach the latitude of Paris. We do not think of the people in France as dwelling in a frozen region—why should we those of Minnesota?

Let us cross the boundary and take a look at the British possessions, which in due time will share with us a common destiny. We are upon what is called the "Fertile Belt," a vast tract of land which the Hudson's Bay Company have reserved

while giving up their charter. It is one of the most fertile sections of the continent, watered by the Assiniboine and the Sascatchewan. We must travel 1000 miles from St. Paul before reaching the latitude of Edinburg. We may still keep on till we have made fifteen hundred miles from St. Paul before we reach the latitude of Stockholm and St. Petersburg!

It is as far from St. Paul as it is from St. Paul to Boston! All this vast region is susceptible of settlement. In Russia wheat is cultivated as far north as St. Petersburg. Why may it not be grown on the banks of the Peace River? Barley is grown in latitude 63 at Fort Simpson, just as it is hundreds of miles north of St. Petersburg.

Think over the conditions—of fertility of soil, mildness of climate—and can you see any reason why in the future there may not be as dense a population in the Northwest as in northern and central Europe on the same parallels of latitude? Look at the rivers and the lakes—see how they are connected. It is pure water which flows through them. The plains are not alkaline deserts, but boundless savannas fragrant with flowers in spring time, and warming with verdure in summer. Over all this vast reach, railroads may be constructed as easily as in Illinois.

Coal crops out in the Valley of the Red River, on the Moose and the Assiniboine. It makes its appearance on the banks of the Missouri and Yellowstone. It is found at the base of the Rocky Mountains, and all the way north to the Arctic Circle. Timber is scarce on the plains, but there is fuel in inexhaustible quantities beneath the soil. Railroads will bring timber. Do you think that railroads will be blocked with snow during the winter? Remember that the snow fall is less in the Northwest than it is in New England. One of the finest railroads in the world is that running from St. Petersburg to Moscow. It is never blocked by snow.

Look at the map of the Northwest if you would see how far north that railroad lies. Draw your finger along to the sixtieth degree of latitude, to where it crosses the Mackenzie River. The Hudson Bay Company have a fort at that point, called Fort Liard. Think of it as a city with a million inhabitants. Change the name of the Mackenzie to Neva. Rear upon its banks regal palaces and golden-domed churches. Span its waters with

magnificent arches. Behold the residences of nobles in the surrounding country. Think of a railway, straight and wide, running over the plain four hundred miles, with scarcely a curve, connecting the new with the old capital of the Empire. The old capital has a population of fifteen hundred thousand, more than in New York and Brooklyn together. We think of New York as the metropolis of the New World, but Moscow surpasses it in the number of inhabitants and in gorgeousness of architecture. The golden domes and gilded spires of four hundred churches pierce the sky above the old Muscovite city. Its Kremlin is still one of the wonders of Europe. If such capitals can exist in Europe, why may not all this region, possessing a fertile soil and equable clime, be the abode of a mighty race in the future? Why may there not be great cities, towns, villages, manufactures, railroads, telegraphs, school houses and churches all over this region, now the home of the buffalo, and the last hunting ground of the Indians?

We have been looking at the region in the far Northwest, and now let us travel westward, along the line of the North Pacific Railroad, which is to start from some point on Lake Superior. When it reaches the Mississippi it will be connected with all the network of railroads leading to Chicago and other points south It will leave the valley of the Red River of the North, reach the Missouri at the Great Bend, follow up the Yellowstone, cross the Rocky Mountains, and reach the Pacific at Puget's Sound, with a branch down the Columbia to Portland.

The most northern point of the line will be near the Great Bend of the Missouri, in the latitude of Vienna and Central France. Yet the public somehow have obtained the idea that the country along the line cannot be inhabited on account of cold, and that the railroad never can be operated on account of snow.

Navigation nearly to the Rocky Mountains.—Capt. Blakiston (quoted by Mr. Rawlings) says: "Taking either branch of the Sascatchewan River, it is navigable for boats from Lake Winnepeg to near the base of the Rocky Mountains, a distance of 1200 miles."

He says he travelled 1000 miles up it to Fort Edmundton at a time of year when the water was lowest.

Homes for the Immigrant.—Mr. Rawlings says of this country: "The splendid landscapes of the Assiniboine that adorn the great picture gallery of nature cannot be closed for ever. The measureless prairies that stretch in vast waves of beauty from the Lake of the Woods to the base of the Rocky Mountains, redolent and gorgeous with the richest profusion of rose bushes, blue bells, woodbine, convolvulus, helianthii, and thousands of nameless and delicate flowers, tell the beholder the wealth of soil that supports them in their entangled and untrained luxuriance of variety and numbers. The thousands of small lakes—sweet eyes of earth that dot the valleys—invite him with their clear waters and fisheries; the rivers that spread, interlace and ramify for thousands of miles, tell of a well-watered soil. * * * Game, such as the buffalo, swarm over the plains, while the stately cariboo, the prowling bear, the wily fox, the pretty mink, the busy otter, the nimble squirrel, and the scented rat, are swarming through the forest and by lake and river. Of birds, there is the majestic eagle and the blue-winged jay, the murderous hawk and the little jewelled humming bird; together with duck and pigeon, sandpiper and cherry bird, loon and partridge, magpie and blackcap, nightingale and swallow, grouse and snipe, kingfisher and plover."

The Red River Settlement.—14,000 *People North of Minnesota.*—What is called the Selkirk Settlement, sixty miles north of Pembina, numbers about 14,000 souls—Europeans, French-Canadians, and half-breeds. "One-half the population are hunters and the other half farmers. The hunters, mostly half-breeds, do nothing but hunt buffalo. They make two grand excursions each year, one commencing on the 20th of June and lasting two months, and the other on the 10th of September and

lasting till the 10th of November. The hunters lead a free, happy, wild, romantic life, and are, when in the settlement, temperate and well behaved."

The number of acres of land under cultivation in 1864 was 22,000.

There is quite a trade carried on between St. Paul and this settlement, in furs brought down and merchandise and agricultural implements taken back. There is quite a town at Fort Garry, where a newspaper is printed, churches and schools supported, and the refinements and cultivation of city life sustained. Pianos and music are not unfrequent items in an invoice of merchandise from St. Paul to Fort Garry. All this nearly 600 miles north of St. Paul.

The newspaper is published by Dr. Walter R. Bown, formerly of St. Paul, and has twenty-four columns, filled with reading matter, St. Paul, St. Cloud, and Winnepeg advertisements—the number before us is dated July 3rd, 1869. The town is now called "Winnepeg." We have only room for a few extracts.

LIFE AT WINNEPEG.

(*Local Items from the "Nor'-Wester."*)

The carts are beginning to return from St. Paul.

Flour has fallen to twenty-five shillings per 100 lbs.

The parties who are coming through by way of Superior City are reported close at hand.

The weather has been exceedingly hot during the last two or three days.

FROST.—The customary June frost has done but slight damage in this section, the tenderest plants only being "scorched" to a limited extent.

A good many of our farmers sowed their wheat too thickly, and they are getting sorry for it.

Work commences immediately upon the Lake of the Woods section of the Red River and Lake Superior Road. Mr. Mair has succeeded in engaging fifty laborers.

DEPARTURE.—Dr. Schultz leaves to-day with horses, as far as Abercrombie. The Doctor will visit Montreal and Ottawa before his return, which will be in about five weeks.

IMMIGRATION —Preparations are being made in all parts of Ontario and a portion of Quebec to inaugurate a lively emigration hither during the present summer and fall. Companies are being formed in many localities to come in and take possession of the idle prairies which surround us, waiting for the occupancy of enterprising and practical agriculturalists One correspondent assures us that a large number of families in one locality are making preparations to come in as soon as possible; and another writes from Montreal that a "party of about one hundred young men is forming to leave for this country as soon as arrangements can be completed."

CHURCH DIRECTORY.

R. CATHOLIC CHURCH.—Cathedral of St. Boniface. Mass 6 A. M. and 7 A. M.; Solemn Mass and Sermon 9 A. M.; Vespers 3 P. M. On week days, Mass 6 A. M. and 8.30 A. M. All of the Priests resident in the Bishopric officiate according to appointment.

CHURCH OF ENGLAND.—St. John's Cathedral. The Venerable Archdeacon McLean, M. A., Rector. Sabbath services at 10.30 A. M. and 3 P M. Sunday School at 2 P M.——Church of the Holy Trinity. Service by Archdeacon McLean every Sunday evening, at 6.30 P. M. Sunday School at 3 P. M.

PRESBYTERIAN.—Kildonan Church. Sabbath Service at 10 A. M., Rev. John Black; and Prayer Meeting at 2.30 P. M. Rev. Wm. Fletcher first Sabbath of every month, at 6 P. M. ——Knox Church, in this town. Rev. Wm. Fletcher second Sabbath of every month, at 3 P. M. Rev. John Black first and third Sabbaths, at 3 P. M. Pews open and free to all. Sabbath School at 2 P. M.

WESLEYAN METHODIST.—At Larsen's building every Sabbath, at 10.30 A. M. Rev. George Young, Minister. "The citizens of Winnepeg are cordially invited to attend."

NORTHERN PACIFIC RAILROAD.—*Its future Business.*—"But," says Mr. Rawlings, after further glowing descriptions of the coal, salt springs, timber, natural grasses, enormous yields of wheat, &c., &c., for which we have not space, "all this land has been shut out from the knowledge of the world. A new era is at hand. The people of the Atlantic are wooing the people of the Pacific; they would be united by an iron band. * * Starting from La Crosse to St. Paul, Minnesota; from Fon du Lac, at the head of Lake Superior; and from St. Paul,—we have a system of railways, which are partly built and which are now under contract and construction, to the Red River of the North. * *. Carry out the project of a railroad to the Pacific Ocean, at whatever cost to the British Government or people, and the future of that country will present a panorama of magnificence unexampled in history, and before which the splendor of Roman wealth, in the days of Augustus, will sink into insignificance. The silks, teas, and opium of China will swiftly speed over the Rocky Mountains to the warehouses of Europe; the spices and Oriental luxuries of India will be transported over lands where the red race but an age since had trapped the beaver and the ermine; the re-awakened commerce of Japan would find a way across the prairie land of Hudson's Bay Territory; the gold of California, of British Columbia and the Sascatchewan Valley, would find a safe passage, by the great lakes, to

the Atlantic; the wool of California would find a more direct route to England; and the homeward and outward bound would cross the Atlantic on their way to India, China, Australia, California, British Columbia, British North America, and the United States, in social companionship."

The Northern Route the Shortest and most Available.—Its Effect on Minnesota.—The applicability of this glowing language to Minnesota becomes apparent when we consider that Minnesota is the mouth of the funnel through which all this traffic and travel must pass—where bulk must be broken and cars changed.

The single fact which fixes this destiny and crystalizes it as a logical conclusion sure as fate, is found in the following figures from the Message of Gov. Marshall, January, 1869:

"The distance from New York to Puget's Sound, via the Northern Pacific Railroad, is 2892 miles; from New York to San Francisco, via the Union Pacific Railroad, 3417, a difference of 525 in favor of the Northern Route. From Chicago to San Francisco, by the Union Pacific Road, the distance is 2448; from west end of Lake Superior to Puget's Sound, by the Northern Pacific route, the distance is 1775 miles, a difference in favor of the northern route of 673 miles, or more than one-fourth; while Puget's Sound is nearer by from 700 to 1000 miles to Japan, China, and India, than San Francisco is."

Also in the following from Thomas D'Arcy McGee, (quoted by Mr. Rawlings in "America, from the Atlantic to the Pacific:")

"Every one can understand that the American route from Western Europe to Asia, which lies farthest to the north, must be the most direct. Any one glancing at a globe will see where the 46° parallel leads the eye, from

the heart of Germany, through the British Channel, across to the Gulf of St. Lawrence; and from our Gulf westward to the Sascatchewan, to Vancouver's Island—the Cuba of the North Pacific; and from Vancouver to the rich and populous archipelago of Japan. This course was demonstrated by Capt. Synge to be 2000 miles shorter between London and Hong Kong than any other in existence."

The *Chicago Tribune*, noticing the movements of the company to survey and commence building the North Pacific Railroad across American territory, admits the superiority of the route over all others. It says:

"If the company build the road in good faith, they will become the largest landed proprietors in the world. Congress has granted them every other section for forty miles on each side of it from the head of Lake Superior to Puget's Sound or the Pacific Ocean—that is, a belt of country west from Lake Superior entirely across the continent forty miles wide. The distance is, in round numbers, seventeen hundred miles, in all 68,000 square miles—territory enough to make three States as large as Illinois, Massachusetts and Connecticut. Nor is this land, like *nine-tenths of that along the Union and Central Pacific Railways*, worthless. The surveys made years ago, and the accounts of all travelers, agree that the country along *nearly the entire line of this road is capable not only of cultivation, but of sustaining a large and highly prosperous population.*"

After further noticing the facts that there are less obstructions from snow on this route, Capt. Mullen having crossed the Rocky Mountains six times in the winter of 1854–5, and never found snow over fifteen inches deep; that "*steam communication can be opened entirely across the Continent by building only 730 miles of track,*" the remain-

ing distance of a thousand miles being occupied with navigable rivers; that the grades are easier, having only two summits to cross, while the Union Pacific had six, the northern route lying up the valley of the Missouri and down that of the Columbia, the *Tribune* concludes: "It is a thousand miles nearer, perhaps more, from Chicago and the great Atlantic cities to Japan and China by the Puget's Sound route than it is by San Francisco. Ships passing between that city and Asia always sail north of the Straits of Fuca in order to follow the shortest great circle to their destination. Hence the northern line would have most important advantages in competing for the through trade and traffic between Eastern Asia and America. On every consideration, therefore, of national development and personal pecuniary advantage, it is to be hoped the Northern Pacific Railway Company will push forward their great work to completion as fast as men and money can do it."

The Work to go Forward.—The *Philadelphia Press*, of May 22d, 1869, had the following:

"Mr. Ogden, in his speech night before last at the Cooper Institute, said he had been for the last two weeks, particularly for the last few days, engaged in negotiating with Jay Cooke & Co., of Philadelphia, by which Mr. Cooke would become the financial agent for the construction of the great northern railroad from Lake Superior, through Minnesota and across the Plains, to Columbia River, bringing us 800 miles nearer the empire of Japan than the present Pacific Railroad. The negotiation was substantially closed, and most satisfactorily too, and he hoped the work would soon be commenced and completed. This is a deserved tribute to the financial ability of Mr. Cooke, and no less to the business reputation of Philadelphia. This new road, which is to run from Superior

to Puget's Sound, will probably be in the end the great continental railway, on account of the advantages it possesses of being projected across the continent on the isothermal line which secures at all seasons of the year a mild climate, which in turn secures wood and water."

Since then surveys have been going on, and an expedition set on foot by Jay Cooke to examine the entire route. "Carleton" was the Boston correspondent of this expedition.

PRESENT CONDITION OF THE RAILROADS OF MINNESOTA.—In January, 1869, the Governor's Message gave the following figures:

	Constructed in 1868, Miles.	Whole line in operation, Miles.
First Div. St. Paul & Pacific, main line...	35	51
First Div. St. Paul & Pacific, to Sauk Rapids		81
Minnesota Valley, now St. Paul & Sioux City	23	90
Milwaukee, St. Paul, & Minneapolis.....		131
Winona and St. Peter.....		106
Southern Minnesota.....	20	50
Lake Superior & Mississippi.....	30	30
Hastings & Dakota	20	20
	128	559

A total of 559 miles in operation in the State.

(For progress since, see closing pages of Part First.)

Land Grants and other Aid.—Each of the first ten roads named below have a Congressional land grant of 6400 acres of land for each mile of road, except the North Pacific, which has 12,800 to the mile. In addition to this, the Lake Superior & Mississippi Railroad has a grant of seven sections to the mile of State lands, and a $250,000 bonus of St. Paul city bonds.

1st. The St. Paul & Pacific Railroad, from St. Paul, via St. Anthony, Sauk Rapids, and Crow Wing, to Pembina, on the Red River, 400 miles.

2d. First Division of St. Paul & Pacific, main line, from St. Paul, via St. Anthony and Minneapolis, to Breckinridge, on Red River, 200 miles.

Also, from St. Paul, via St. Anthony, to Sauk Rapids, 81 miles, with a branch to Lake Superior from some point between Sauk Rapids and Crow Wing, 120 miles.

3d. St. Paul & Sioux City (late Minnesota Valley,) from St. Paul, via Mankato, to the south-western boundary of the State, 170 miles, to connect with a road from Sioux City, 70 miles long.

4th. The Milwaukee, St. Paul, & Minneapolis, from St. Paul and Minneapolis, via Mendota, Faribault, and Owatonna, to the State line nearly due south, intersects the Winona & St. Peter at Owatonna, and gives the only all rail route to Milwaukee and Chicago, 110 miles long.

5th. Lake Superior & Mississippi, from St. Paul, nearly due north to Duluth, 150 miles, with authority to connect with a branch from Superior.

6th. The Hastings & Dakota, from Hastings, via Farmington, through the counties of Scott, Carver, and McLeod, to the Big Stone Lake.

7th. The Winona & St. Peter, from Winona, via Owatonna, Waseca, and St. Peter, to the western boundary of the State, 250 miles.

8th. The Southern Minnesota Railroad, from La Crescent, up Root River Valley, through the entire southern tier of counties, via Lanesboro, Austin, Albert Lea, Winnebago City, Fairmount, and Jackson, to the State line, 250 miles; and thence to the Great Bend of the Missouri.

9th. The Northern Pacific Railroad, from Lake Superior, either at Superior or Bayfield, via St. Cloud, or above Crow Wing, to Breckinridge—two surveys having been made and the line not yet definitely located.

10th. The Stillwater & St. Paul Railroad, via White Bear Lake, 18 miles.

11th. The Chicago & St. Paul Railroad, from St. Paul, via Hastings and other river towns, having a grant of State lands fourteen sections per mile, and graded 20 miles.

Projected Roads and outside Connections.—No less than twelve other roads are chalked out, some of them chartered, others have more or less aid in the way of local bonds, and the aid of the main trunk lines, some of which will be built very soon, and others not so soon. Among these are the following: From Lanesboro, Fillmore County, via Chatfield, Rochester, and Hastings, to St. Paul; from Red Wing, via Cannon Falls and Faribault, to Blue Earth City; from Wabasha, via Rochester and Lansing, to Omaha, with a branch, via Faribault, to St. Peter; from Owatonna, via Albert Lea, to the Iowa line; from St. Cloud to Mankato; from Minneapolis to St. Cloud, and thence to Alexandria, via Sauk Centre; from Taylor's Falls to connect with the Lake Superior & Mississippi Railroad; from St. Peter, via Mankato and Blue Earth City, to the Iowa line; from White Bear Lake, via St. Anthony, Minneapolis, Shakopee, Chaska, Carver, and Henderson, to St. Peter; from St. Paul to St. Anthony and Minneapolis, to run hourly; from St. Paul to Hudson, Wisconsin; and from St. Paul to Stillwater and Taylor's Falls.

Connections.—Of the roads finished and running are the Chicago and Galena, Chicago and Prairie du Chien, Chicago and La Crosse, all connecting with boats or railroads. Of those partly finished are the Northern Wisconsin, finished 50 miles from Tomah (on the Milwaukee and St. Paul Road) towards Hudson, rapidly progressing and expected to reach Eau Claire by January, 1870.

This will be the shortest route from St. Paul to Chicago. There are several Iowa roads rapidly progressing towards our southern boundary, among which are the Burlington, Cedar Rapids, and Minnesota Railroad; the St. Louis and St. Paul Railroad, connecting with the coal fields of Iowa; the Keokuk and Des Moines Railroad, and others. Westward are the North Pacific and the Union Pacific. In Wisconsin, the Hudson and Superior Railroad, with a branch to Bayfield, will give us a competing line to the lake, and the Wabasha and Green Bay Railroad still another; while more important than all, the improvement of the Wisconsin and Fox rivers by Congress, as recommended by Gen. Warren, will connect Minnesota by water with the Atlantic and cheapen her freights more than all the projected railroads combined.

Rivers and Steamboat Navigation.—As to navigable rivers, see "Water," &c., page 20. A steamboat on Leach Lake already traverses 300 miles of the waters of the Upper Mississippi, another plies its vocation on Lake Minnetonka, the steamer International runs from Fort Abercrombie to Fort Garry, on the Red River, and four daily lines employ 61 steamboats and 248 barges on the Lower Mississippi, the Minnesota, and the St. Croix.

The following table shows the progress of the steamboat business of the Minnesota for twenty-five years.

Steamboat Arrivals at St. Paul.—Growth of Commerce.

Year.	Arr.	Year.	Arr.	Year.	Arr.
1844,	41	1853,	235	1861,	927
1845,	48	1854,	310	1862,	1015
1846,	24	1855,	563	1863,	731
1847,	47	1856,	759	1864,	594
1848,	63	1857,	965	1865,	829
1849,	85	1858,	1068	1866,	1051
1850,	104	1859,	808	1867,	883
1851,	119	1860,	776	1868,	835
1852,	171				

Tonnage.—Geo. W. Moore, Collector of the Port of St. Paul, gives the registered tonnage of steamboats as 11,104.74, barges 8,956.06. Boats of the Northern line and Diamond Jo line, running to St. Paul, but not registered, he estimates as fully equal to the above. This only includes 84 barges of the 248. The Secretary of the Chamber of Commerce reported the tonnage for 1868 as 53,686.

Railroads against Steamboats.—The decrease of arrivals is explained by the finishing of our railroads, and the increase of our barge business. At Winona the arrivals for 1868 (up and down) were over 1800. As an instance of how much of the river commerce has been diverted to our railroads, the following table is instructive:

Leading Articles of Freight forwarded from St. Paul by the Minnesota Valley Railroad.

	1867.	1868.
General Merchandise (lbs.)...	11,166,420	14,560,660
Machinery (lbs.).....	55,050	363,640
Agricultural Implements (lbs.)	112,250	802,330
Lime and Cement (bbls.).....		422,703
Lumber (feet).....		908,890

Freight carried during the first Six Months of 1868 *and* 1869.

	1868.	1869.
Total Freight (lbs.).....	40,176,978	118,779,088
Wheat (bushels).....	156,483	653,461
Flour (bbls.).....	22,246	28,937
Lumber (feet).....	2,672,733	3,295,727
Earnings of the road (6 mos.).	$79,186.01	$183,646.27

When to this is added the freight and travel entering and leaving the State by the Winona and St. Peter Railroad, the Southern Minnesota Railroad, and the Milwaukee and St. Paul, the wonder is that the arrivals of steamboats at St. Paul are not still more reduced.

EXPORTS AND TRADE.—During 1867, the estimated amount of wheat exported was ten million bushels;

lumber and logs manufactured, according to the Governor's Message, during 1868, 249,889,558 feet, valued at $3,750,000, a large part of which was exported. Amount of fur trade, estimated by Secretary St. Paul Chamber of Commerce, 1867, 1200 bales of furs and 30,000 buffalo robes; 1868, value of this trade, $600,000. Goods for the Hudson Bay Company pass through St. Paul annually to the amount of $975,000.

Winona's exports of wheat in 1868 were 2,432,086, making her the fourth primary grain market in the United States—Chicago, Milwaukee, and Toledo alone leading her. The wholesale trade of St. Paul is reported by the Secretary of the Chamber of Commerce at $15,000,000 during 1868. These are the principal articles exported. (For more on this subject see St. Paul and Winona, in Part Second.)

CHAPTER X.

WATER-POWER AND MANUFACTURING RESOURCES.—Among the striking and pre-eminent evidences that this State was made with the natural internal resources to make her great, independent, and self-sustaining, and the home of millions of prosperous people, none are more striking than her inexhaustible water-power unparalleled on the continent in its capacity, and unequalled in any State in its universal distribution over every part of the State. St. Anthony Falls, with a fall of 64 feet, including her rapids and a hydraulic capacity of 120,000 horse power, "more than sufficient to drive all the 25,000,000 spindles and 4000 mills of England and

Scotland combined," "greater than the whole motive power—steam and water—employed in textile manufactures in England in 1850, and nearly seven times as great as the water-power so employed;"* St. Croix and St. Louis River Falls, second only to St. Anthony, and equally well located; Pokegama Falls, Little Falls, Sauk Rapids, Cannon Falls, Vermillion Falls, the Rum, Elk, Crow, Sauk, Zumbro, Root, and Minneiska rivers with their tributaries, the forty-three rivers and creeks on the north shore of Lake Superior, "the volume of water in the least of which is sufficient if properly appropriated, to wash fifty tons of stamped rock per day, and the majority of which find their way to the lake over frowning precipices magnificently high;"† and the hundreds of smaller cascades and rapids that chequer the scenery and adorn the beauty of almost every lake and rivulet, combine to give to Minnesota a water-power for the State at large, and for almost every county, which challenges the world for a parallel. When we add to this her inexhaustible raw material of wheat, corn, and barley, whose average yields we have shown compare with the best States in the Union; her thousands of square miles of pine lumber and hard wood; her rich fleeces of the finest wools; her mountains of granite, iron, and copper ore; her quarries of slate, limestone, and brown stone; her beds of clay, tripoli, mineral paint, peat, and white sand for glass; her numerous salt springs; her just developing coal fields; her promising but yet to be assured mines of silver and gold; and her easy access by lake, river, and railroad, by which these resources may be supplemented to any extent by the raw materials of the outside world,—when all these advantages are grouped with her water-powers, we feel

* Wheelock's Report. † Hanchette, State Geologist.

that we are safe in entering her as a manufacturing State against the world, and in claiming for her the champion's belt, whose inscription shall be EXCELSIOR.

THE RAW MATERIALS FOR MANUFACTURING.

Coal has just this summer been discovered in Redwood County, on the Minnesota River. Its existence is undoubted. Whether it can be worked to advantage is now being tested, and remains to be seen.

Peat.—Prof. Henry H. Eames, State Geologist, 1866, says, in his official report: "In nearly every portion of the State are immense deposits of peat, and the supply for all practical purposes is inexhaustible."

Iron, Copper, Gold, and Silver.—Speaking of Northeastern Minnesota, he says: "The metals occurring in this portion of the State are iron, copper, gold, and silver."

Tripoli.—He describes a bed of tripoli near Stillwater as of "very fine quality," "inexhaustible for all practical purposes," and "a source of wealth to the State."

Granite.—"The most prevalent rocks," he says, "in the northern part of the State are granite, porphyry, hornblendic, silicious and talcose slate," &c.

White Sand for Glass.—He says of "the white sandstone forming the banks of the river in Ramsey County, I have made some trials in regard to its adaptability for the manufacture of glassware, and find it produces glass of good quality, nearly colorless."

Dr. Owen's (U. S. Geologist) report says: "The St. Peter's (Minnesota River) country certainly can afford as pure a quality of sand as that obtained in Missouri, and now, I believe, extensively used in the glass houses of Pittsburg."

Slate.—Described by Dr. Owen and Clarke, geologists, on the north shore of Lake Superior, as "literally inex-

haustible." Clarke says: "If one-fourth of this slate area in the St. Louis Valley proves available — and doubtless one-half will—we have ten sections of land producing slates which may be quarried to advantage fifty feet in depth, and will yield a thousand millions of tons."

Pine and Hard Woods.—For agricultural implements, tubs, buckets, barrels, furniture, matches, &c., the supply of hard wood is ample.

For lumber, our pineries are inexhaustible. (For the location and extent of these see "Pineries," pages 19 and 143.)

MANUFACTURES.—By the census of 1860, the number of establishments in the State was 511; capital invested, $2,007,551; annual product, $4,295,208. We have no report from the State, but at the Falls of St. Anthony alone the Secretary of the Board of Trade reports for 1868: Capital invested, $2,563,050; annual product, $5,019,032. From this report of one point only, the immense increase in the State in eight years may be estimated, there being manufactories of flour in almost every county, of lumber at Stillwater, Anoka, and many other points, and other manufactories in every principal town. Flour is manufactured largely for export.

Lumber.—In 1861 the total product of the pine lumber manufacture of the State was, according to the Commissioner of Statistics, 69,950,000 feet. In 1868, according to the Governor's Message, 121,000,000 feet. In 1861 there were logs surveyed, 92,590,528 feet. In 1868, 249,267,-918 feet. Value of the lumber product, $3,750,000.

IRON AND COPPER.—Of these minerals, whose presence in the Lake Superior country all our geologists have testified to, the report of the Commissioner of Statistics for 1860, says:

"We possess in the mineral ranges of Lake Superior deposits of iron and copper which have been shown by the severest tests to be superior to any on the continent, and fully equal in tenacity and malleability to the best Swedish and Russian Iron."

Mr. Rawlings, the English author of "America, from the Atlantic to the Pacific," says:

"The whole basin of Lake Superior indicates the presence of iron and copper. * * * On the north shore of the lake, in Minnesota, near the western extremity of the lake, and in Canada, for a distance of 200 miles northwest from the Saut St. Marie, are well defined copper regions which are now attracting the attention of capitalists and will prove as productive as the Keewenaw, Portage Lake, Ontonagon and Cass Lake Districts" in Michigan.

Chief Justice Chase, Secretary of the United States Treasury for 1864, in his report, says:

"In 1862, the number of vessels engaged in the trade of Lake Superior was, schooners, 543; tons, 175,595. Propellers, 121; tons, 65,124. Steamers, 174; tons, 124,833. Total, 365,552 tons. These vessels carried outward 150,000 tons of iron and iron ore, and 9300 tons of pure or native copper, valued together at $12,000,000.

Shipments of copper from Lake Superior from 1858 to 1862.

	Tons.	Value.
1858,	5,896	$1,610,000
1859,	6,041	1,932,000
1860,	8,614	2,520,000
1861,	10,347	3,180,000
1862,	10,000	4,000,000

Products of Iron Ore in Lake Superior Region.

	Tons Ore.	Tons Pig.	Value.
1855,	1,445		$14,470
1860,	116,998	5,660	736,490
1861,	45,430	7,970	410,460
1862,	115,721	8,590	984,976

This of course is not given as Minnesota statistics, but as showing the capacity of the Lake Superior mineral ranges, which extend from Fond du Lac to Pigeon Point, nearly 200 miles within the limits of Minnesota.

Thomas Clarke, Assistant State Geologist (1864,) says: "To Minnesota belongs the furnishing of the entire Mississippi Valley demand for copper, and the upper portion with iron. 5000 tons of the former, and 25,000 of the latter, is estimated as the demand at the ordinary rates of consumption. To Minnesota belongs the manufacturing of these crude materials."

SLATE QUARRIES.—Clarke's Geological Report locates the St. Louis quarries in sections 3, 4, 5, 6, 7, 8 and 9, town 48, range 16, and the unsurveyed region north for two or three townships.

Aug. H. Hanchette, State Geologist, in his Report for 1864, says: "An inexhaustible quarry of argillaceous slate occurs above the falls of Pigeon River, that with trifling expense can be quarried and placed at a point of shipment thence to any point on the chain of lakes."

He speaks of the same quality of slates at other points, all "admirably adapted for tiling and other purposes, and susceptible of being economically wrought."

Cost of Quarrying and Value of Slate.—Mr. Clarke's report (1864,) says: "The cost of quarrying and dressing at the Vermont quarries is about $2.50 per square (100 feet,) or $7.50 per ton. The market value at Chicago is from $5.50 to $7.50 per square, or $18 per ton. At St. Louis it is *third* class freight higher."

"A ton (about four squares) may be transported from the St. Louis River Quarry to the Mississippi by railway at $3." It may be taken to all points in this State accessible by boats or railway at an average cost of fifteen dollars per ton, or at most $4 per square—little, if any,

more than pine shingles : the former as good for a century as the latter for a decade."

He estimates the annual demand for slates in the Mississippi Valley at one hundred thousand tons.

Brown Stone, which has been tested in the fire and found capable of resisting its influence, abounds in the Lake Superior country, and is already being exported to Chicago and Milwaukee.

Granite.—A company is incorporated in St. Paul, and is supplying the material from quarries near Sauk Rapids for building the United States Custom House.

Mineral Paint, equal to the best in use, has lately been developed in Redwood County ; *Marl* exists near Minneapolis and other places ; *Porcelain Clay* in Wabasha County.

Salt Springs abound in the Red River country, of which twelve have been located by the State. (See map.)

Gold and Silver.—The most to be said of these is that capitalists from St. Paul and New York are now operating with quartz mills at Vermillion Lake, the tests that have been made being satisfactory to them.

THE PINERIES.—In addition to what has been said as to their extent and location, and their annual products, something as to their ability to stand the drafts of the future and the manner and style of working them may not be uninteresting.

Will They Fail?—Of the St. Croix Pineries—only one section of the pine area—a correspondent of the *Daily Wisconsin*, estimating the amount of lumber already cut at one billion feet, says : "Old pine land explorers vary their estimates of the pine timber remaining from three to eight times the amount already cut. A mean estimate would bring it to five and a half billions. The present

average of one hundred millions yearly cutting would exhaust the St. Croix pineries in fifty-five years. Two per cent. of growth would extend the measure to one hundred years. The amount of hard wood timber in the St. Croix is treble the amount of pine."

Capt. John P. Owens, for twenty years a resident of Minnesota, says, in a letter to the *St. Paul Press*, in February, 1869: "It must be remembered that tracts from which all the suitable timber was cut ten or twelve years ago, are now ready to cut over again, so rapid is the growth of the younger pines. A man who owns pine land may, as a general thing, calculate that it is gaining in value ten per cent. annually by the growth. We don't hear so much now-a-days about the pineries giving out in a few years as we did twenty years ago."

LIFE IN THE PINERIES.

BY H. M. ATKINS, ESQ., PRINCETON.

Going in.—In November the "teams" and "crews" start into the woods. Large and strong wagons, drawn by two, four, or six horses, or four, six, or eight oxen to each, heavily laden with "supplies," which term, in lumberman's language, means all the necessaries, and some luxuries, for the support of the men, and "feed" for teams, escorted by crews of men, who are to cut the trees and prepare the logs, go winding their way up among the pine forests of the St. Croix, the Rum, and the Upper Mississippi rivers. The land has been previously explored, and, arrived at the selected spot, the work of building a "camp" for the men and a stable for the teams at once begins.

Stumpage.—The lumbermen are not often the owners of the land operated upon. They usually buy the "stumpage" of the land owners, at a specified price per

thousand feet of lumber cut, the amount being ascertained by "scaling," or measuring, after the logs are cut. The price paid for "stumpage" varies from $1 to $3 per thousand feet, according to the quality of the trees and their distance from streams of drivable water.

Camp.—The "camp" is usually placed near a river or stream for convenience in procuring water. The materials for building, pine and oak, are always near by.

The camp is a large and well-built log house, with roof of pine or oak "splits" instead of shingles, and floor of small pines, hewed flat and smooth, or in some cases of boards. It is heated by a large box stove, while a large cooking stove at one side or end is managed by the cook. A large table is a fixture in the house, and the dishes for eating and drinking are of tin instead of crockery. Along one, or if the crew is large, along both sides of the camp, are the "bunks" for sleeping. These are shelves or stagings elevated a foot or two above the ground, six or seven feet wide, and as long as the length of the camp will allow them to be: usually nearly the whole length. Along the side towards the center of the camp is placed a board, plank, or timber, on edge, and rising nearly a foot above the staging. On this staging or "bunk," hay is spread to the depth of a foot, or more; over this are spread, "spreads" so called, being heavy bed coverings like the "comforters" of old times. With one thickness of these the hay is covered, the men lie on this; heads to the wall, feet towards the centre of the camp, as near together as they can lie, and are all covered by one heavy and thick "spread," as wide as the men are long, and as long as may be necessary. The day clothing is not removed upon going to bed, and of course you see from the above, that they all sleep in one bed. There are from six to forty men in a crew. There are no

chairs; only benches made on the spot. At night the camp is lighted with kerosene lamps.

Stables, &c.—The stables are located near the camp; are built of logs, the cracks tightly chinked, and the roof of poles covered with hay. They are well built, warm and comfortable. The teams are fed with hay which has been cut and stacked ready on some natural meadow near, the previous summer, and for provender, ground wheat, corn, rye, oats and barley and unground oats. Many a farmer might profitably take lessons in the art of stock-feeding from these lumbermen.

The Work.—Long before light in the morning, the "cook" and the "teamster" are astir—the former getting breakfast, the latter feeding his teams. All hands are called to breakfast; not much time is needed for making toilet; and the breakfast being eaten, all hands, except the cook, are off into the timber, the intention being to be on the spot ready for work as soon as it is light enough to see. Every man has his particular work to do, and every one knows his place. The "choppers" chop down the timber pines, trim off the branches, and cut off the tops; the "sled-tenders" clear away around the tree-trunks and logs, fix the ropes, "tackles" and chains for loading, and help the teamster in that; the "sawyers" with long, cross-cut saws, saw the tree-trunks into logs of suitable length, and cut into them with axes the letters, signs and symbols that constitute the proprietor's recorded "mark," and by which each log can be identified wherever it may be; the "swampers" cut out roads for the teams and clear them of all undergrowth; the "teamsters" manage the teams and the loading and unloading of logs.

Large, wide and strong sleds are used, commonly called "bobs," they are short and used in pairs; one hitched be-

hind another as the hind wheels of a wagon are behind the forward ones. On these double sleds the logs are rolled and loaded, side by side, and on the top of each other, with the help of teams and pulleys and blocks, usually called "tackle," and securely chained, and so drawn to the "landing," on the bank of the river or large stream, which is a place of an acre or more, completely cleared of all trees, where they are easily unloaded on or over the steep bank and left lying in huge piles to await the spring freshets.

The men work in the timber till noon; then to camp for dinner; then back again and work until dark; then to camp for supper; after that the time is spent as they please until bed time. The work is hard, but the men are almost universally hearty and healthy; while at it, blessed with good appetite, are cheerful and seem to like it. They are so well protected by the pine forests that they are but little affected by the winter cold. The fare is of the very best. The old time pork and beans are still much used and liked; but in addition to these, the rough tables are supplied abundantly with all the common and substantial articles of food and drink.

And so, from early winter until the time of melting snows in March, year after year, the merciless keen axes are plied among the pines.

River Driving.—With the spring freshets comes another phase of the lumberman's trade. The huge piles of logs at the numerous "landings" are all rolled into the water and set afloat, and the work of "river driving" is begun. It is the hardest of hard work—very wearing and exhausting, and commands the highest of wages—$2 to $5 per day and boarded. The men are almost continually wet. No Sundays are known, and five meals a day are invariably furnished. From dawn till dark, in and out

of the cold snow water, it makes no difference which, for the logs must be kept moving with the current, and the continually forming "jams" broken.

The men are organized in "crews" of various sizes, according to the number of logs to be managed, each with a "boss driver" as working leader, and accompanied by a shed or roof-tent of sufficient size to shelter the men while sleeping on the ground, wrapped in "spreads" and blankets, at night; a cook and one or two assistants; a batteaux, being a long, sharp boat, and a large, clumsy flat boat, called a "wongin," for carrying the supplies for cook and crew. The cook moves down the stream from day to day, as the "drive" of logs progresses, with the tent, batteaux, and wongin. The meals, except morning and evening ones, are taken to the men at their work in buckets and baskets, by the cook*ees* or assistants.

If the water is very high, the cross currents are sure to carry many of the logs over low places in the banks, in among the trees and underbrush of the bottom lands, and into sloughs and gullies. The work of getting them back into the stream, called "sacking," is the severest of all. The men must stand and work in the ice-cold water, often up to their waists where they work, and with the aid of "picks" and "cant-dogs" roll and push, and sometimes almost carry, the logs back to the streams.

They become very expert in the business of managing the logs. They will stand erect on one, and keep their feet while it goes rolling over and over in the rapid current, and with no other instrument than a "pick handspike," seven or eight feet long, cross deep, wide, and rapid streams, standing on a single log.

Occasionally, however, a green hand will make a slip and go into the water, and "shut the door" after him, or

"pull the hole in behind him." Then great is the fun at his expense among his associates.

The point is to keep the logs moving continually. They are so numerous as to hide the water in the rivers for miles at times, and it is late in June before they are all safely "boomed," in the vicinity of the large mills, for manufacturing them into lumber, for distribution far and near, in this and the adjoining States.

To this a few items may be added.

Sports.—As would naturally be supposed, so many men brought together to remain four or five months in camp life must have amusements, and the lumbermen are not without them. Their evenings are made lively with music—vocal and instrumental—anecdotes, burnt cork minstrelsy, cards, &c., &c.

Wages.—Teamsters, $40 to $70 per month; cooks, $45; foremen, $70 to $100; good choppers, $35 to $40; swampers, $30; sawyers, $30; ordinary hands, $20 to $25; wages on rafts average $35; pilots, $1200 to $2000 for the season. Average price of logs at Stillwater, in 1868–9, $12 per 1000 feet. 225 rafts left Stillwater in 1868, each raft requiring 23 men to run it—giving employment to 5000 men. The Pineries in the winter give employment to nearly 4000 men, and over 2000 horses and oxen. They also afford a fine home market for the produce of farmers.

CHAPTER XI.

MINNESOTA AS A FRUIT COUNTRY.—WILD RICE.—*Wild Fruits.*—Among these are strawberries, raspberries, blackberries, gooseberries, huckleberries, grapes, plums, cranberries, and cherries. The wild plum is so abundant that it is brought into the towns by the hundred bushels, and sold from fifty cents to $3 per bushel, according to the season. It is almost equal to the cultivated plum for eating raw or preserving. The huckleberry and grape are also most abundant, and from the latter the Minnesota farmer makes his native wine and refreshes himself under his own vine and fig-tree, with no revenue collectors to molest or make him afraid. The huckleberries abound principally on the barren ridges of the northern and north-eastern parts of the State.

Cranberries.—From the cranberry marsh on his farm, many a farmer makes more money than on his crop. The extent of the growth of this fruit in Minnesota is wonderful—so remarkable that formerly we were called "The Cranberry State." While it is a native of the State, and to be found in every part of it, it is especially abundant in the northern and northeastern parts of it. David Dale Owen, United States Geologist, reports officially: "This staple native production of the Northwest is no where more abundant or of finer quality than in the region bordering on the St. Croix River."

Clarke, Geologist, says: "There are 256,000 acres of cranberry marsh in the triangle between the St. Croix and Mississippi, and bounded north by the St. Louis and Prairie rivers."

Cultivation of Cranberries.—The very high prices obtained for the cranberry, from $3 to $8 per bushel, would make its cultivation profitable. While it is extensively cultivated in the Eastern States, some farmers having as much as ten acres or more devoted to it, and books written on it, among the number one by Estewood, published by Orange Judd & Co., 41 Park Row, New York, worth 75 cents,—very little attention has been paid to it in Minnesota. The high-bush variety is cultivated in most of the nurseries of the State, and sold for yards and gardens. Mr. Heinrich Hotz, of Watertown, Carver County, is cultivating the low vine cranberry with success, for profit and sale. Owen and Clarke both speak of its susceptibility for cultivation, and Clarke says: "The drainage of the cranberry marshes may be so arranged that they may be cleared, all other plants and grasses eradicated, and then restocked with good thrifty vines—care being taken to select the gray fruit variety, as it is more prolific and withstands the frosts that sometimes occur before the fruit ripens. The drainage might be controllable, so that the cultivator could irrigate the vines when his experience taught the proper time."

There is a splendid field among these 240,000 acres of cranberries for some enterprising genius to carry out this suggesstion and make a fortune. There they are free to the first comer, open to homestead entry, without the cost of a dollar; and besides these, tens of thousands of acres more, scattered over every portion of the State. Only a few hundred bushels are now exported from the State. The supply is sufficient to export thousands of bushels.

Apples and Cultivated Fruits.—All the small fruits, such as strawberries, currants, raspberries, gooseberries, and grapes, are successfully cultivated; also several

varieties of plums, very fine and large, pears and cherries, the Siberian crab, Transcendant and Hyslop, and the best of apples of many varieties. Like most new countries, we have had to pass through a decade or more of experiments and failures, to learn the peculiarites of climate, soil, and exposures, and the varieties best adapted to these peculiarities. Our pathway for fifteen years had been strewn with failures. We knew the cause was not the cold climate, for apples are raised in Canada, New Brunswick, Russia, and higher latitudes and colder climates. So we persevered in experiments, and the last two years have demonstrated that we can raise the largest and finest apples, for we have actually raised thousands of bushels the present year.

At the State Fair, in September, at Rochester, one man from Minnesota City, in Winona County, exhibited fifty barrels of apples raised in that county, and said he had 200 more at home. Persons who claim to be well informed estimate that Winona County alone has raised 30,000 bushels of apples this year.

The *Preston Republican* gives a list of apple orchards in that county, occupying half a column, says all are doing well, and estimates that some of them will produce sixty or seventy bushels of apples.

Mr. L. R. Hawkins, of Maple Glen (P. O.,) Scott County, has apples this year of nearly a dozen varieties, besides cherries.

Truman M. Smith, of St. Paul, H. J. Brainard and W. E. Brimhall in the vicinity, raise over thirty varieties of apples, and several varieties of cherries, plums, and grapes, Smith having eighteen varieties of the grafted apples.

From Robertson's *Monthly* for October, 1869, we condense the following additional facts. The *Le Sueur*

Courier says twenty-eight different varieties of apples are raised in Sharon township, in that county, and of the samples exhibited "a dozen kinds shown were large, luscious, and healthy looking." The trees were from the nursery of Amasa Stewart, of Minneapolis, who "assured us that over fifty different species of apples are now growing in Le Sueur and Blue Earth counties." This statement is corroborated by the *Mankato Review* (Blue Earth County,) which says: "Mr. Mills, of Garden City, was in our city last week, and had with him samples of fifty different varieties of fall and winter apples grown by himself this year." They were mainly seedlings. The editor estimates that there are 500 bearing trees in the county, Mills having 164, Mr. Laird, of South Bend, 25, &c.

Among the many persons who have succeeded in raising apples, and have bearing trees, are Col. D. A. Robertson, of St. Paul, Editor of the *Minnesota Monthly;* Hon. John M. Berry, of Faribault, Judge of the Supreme Court; Dr. Kelly and H. Scriver, of Northfield; A. W. Webster, Geo. W. Clark, Norman Buck, and M. K. Drew, of Winona; John Hart, of Hillsdale, and Amos Shay, of Richmond, Winona County; and J. Marthaler, of West St. Paul, besides numbers of nurserymen and individuals, too numerous to mention.

We have only space to sum up the whole subject in the comments of the *St. Paul Press* on the display of fruits in the two counties of Ramsey and Hennepin alone.

These two fairs have set at rest the long-mooted question whether Minnesota is an apple-growing State. Over two hundred varieties of the apple—exclusive of the crab species—were exhibited at Minneapolis, and a large number at St. Paul, of the finest development and flavor, and this fact will give an

immense impetus to fruit growing in our State. In other fruits, too, especially in plums and grapes, these fairs have given ample evidence of the rich capabilities of our climate.

Among the varieties most generally successful, besides numerous seedlings, are the Duchess of Oldenburg, Red Astrachan, Fameuse, Winter Russetts, Golden Russetts, Golden Sweet, Golden Pippin, 20-ounce Pippin, Bailey Sweet, Price Sweet, Saps of Wine, Seek No Further, Sweet June, Red June, Early Harvest, Early Red, Fall Stripe or Saxton, Jefferson County, Dyer, Summer Pairmain, Limber Twig, Tammany, Hoss, Sweet Pear, &c.

WILD RICE.—*What it is.*—*Its Value.*—"Zizania Aquatica," Pshu of the Sioux, Manomin of the Chippewas. "It is an excellent article of diet, and forms a considerable source of support to the Chippewa Indians," "an acre nearly or quite equal to an acre of wheat for sustaining life."

"It is highly palatable and nutritious, being generally preferred to the commercial rice. The grain is long, slender, of a brown color. In boiling, it puffs out to a pultaceous mass, and increases its bulk several times. It flowers in August, and is ready for gathering in September, which is conveniently done in canoes, the standing stalks being bent over the sides and the grain beaten in."*

Mr. Atkins, of Princeton, Minn., in a contribution to this book, writes: "This rice resembles Southern rice very much in appearance and growth, but the grains are longer than those of the Southern variety, and to the taste it is richer and more nutritious."

Where it Grows.—*Its Extent.*—Clarke, Geologist, estimates 74,000 acres in the "triangle" between the Mississippi, St. Croix and Prairie rivers.

* Owen's Report.

Owen says: "It is particularly in the lake-like expansions of rivers, towards their sources, which give such a marked feature to the distribution of these northern streams, and is so grandly illustrated in their main type, the Mississippi. * *

"It is rarely met with on inland lakes which have no outlet. * * The rice lakes are most liberally distributed in the sections about the head waters of the Red Cedar, Nemakagon, St. Croix and Snake rivers in the south, and the sources of Big Fork and Red Lake rivers in the north, and further east in the Vermillion Lake region." He speaks of "rice fields covering thousands of acres" near Cass Lake, and indeed the same is true of nearly all the lakes and marshes of Northern Minnesota.

The vast extent of this article, and its value, "an acre as good as an acre of wheat," suggests the inquiry—

How it may be Cultivated and made a Source of Wealth?—Upon this point Owen says: "This grain has been frequently introduced to the attention of cultivators, and is worthy of notice, not only for the value of its products, but the peculiar nature of the soil to which it is adapted, being necessarily unfit for any of our ordinary cultivated grains.

"As a native of the Northwest, it is undoubtedly susceptible of increased production, and will doubtless ere long constitute as important an element in the civilized wealth of this region as it now does in adding to the comforts of its wild inhabitants."

Clarke says: "The value of it to the native is no greater than it may be rendered to us. It is probably a biennial. Its greatest yields in alternate years. It grows from the bed submerged by water from 6 to 20 inches. One root has from 3 to 10 stalks and heads. I observed one fact worthy the attention of the civilized

cultivator. It is this: plants upon the margin of the rice beds by the fall of the water left upon the dry ground were quite as prolific as those in the water. This suggests the drainage of rice beds, clearing them from other aquatic grasses and plants, re-seeding with rice and then closing the drain or outlet until the grain is near maturity, when the water may be drawn off and the bed left dry for harvest."

Indian Method of Gathering.—The Indian method of gathering, preparing, and preserving it is somewhat curious. In among the ripening rice—it grows two to three feet above the surface of the water—they go in their canoes, and bending the laden heads over the sides in handsful, beat them off into the canoe with a stick until it is loaded; then to a dry, open space on shore, where it is spread to dry a few days. It is then heated hot in iron or tin kettles, and made thoroughly dry. A cavity is then dug in hard ground, bowl-shaped, and large enough to hold about half a bushel. The inside of the cavity is then beaten hard and smooth. On two sides of the cavity, three or four feet from it, forked sticks, six or seven feet long, are driven into the ground about a foot, and in the forks a small pole is laid. The hole or cavity is then nearly filled with the previously prepared dried rice, and then an Indian—a man *always*, and for a wonder, this being about the only kind of work a *male* Indian is ever known to do—steps barefooted into the hole and the rice, and holding on by the pole in the forked sticks to steady and sustain himself, goes to treading the hulls off the rice.

After being trodden a while, it is taken out and winnowed in the wind, and is then ready for use. As a general thing, nearly three-fourths of the hulls are got rid of by this process, and those that remain never seem

to trouble the Indians in eating; neither does the dirt from the treading feet, as they never trouble themselves to wash the rice before cooking it.

The rice is stored by being put up in baskets of various sizes, and buried in dry places until it is wanted.

CHAPTER XII.

EDUCATION AND RELIGION.—*Schools.*—Every township is entitled to its free school—two sections of land in every township belonging to the school fund, making in the aggregate about 3,000,000 acres when all surveyed. It is sold at not less than $5 per acre, and the cash proceeds invested in United States or Minnesota State Bonds. The Governor's Message of January, 1869, says: "The sales of school lands during the year have been 76,910 acres, producing $464,840.61, which sum added to the former accumulations of the permanent school fund, makes the magnificent fund of two millions, seventy-seven thousand and eighty-two dollars."

He estimates the sum ultimately to be derived from school lands at $16,000,000.

"Interest of the school fund in 1868, $115,794.38. A two mill tax levied in each county for school purposes. Whole number of children in the State (between 5 and 21) in 1868, 129,103, an increase of 14,682 over 1867. Teachers, 3276; increase, 691. Paid teachers, $322,-785.16; increase, $67,798. Value of school houses, $1,091,559.42; increase, $345,168.42. Value of school houses built 1868, $288,687.37. Minnesota's total expenditures for school purposes during the last two years

exceed $1,500,000, and her school houses have already cost over $1,000,000." Number of school houses in 1868, 1000 frame, 37 brick, 48 stone, 681 log; total, 1766. (See "Counties," Part Second.)

These figures show a more liberal provision for common schools than any other State in the Union, and give assurance to immigrants that in going to Minnesota they are not going beyond the confines of civilization and the privileges and blessings of education for their children.

STATE UNIVERSITY, COLLEGES AND NORMAL SCHOOLS.—A State University, with a costly building, an endowment of 46,080 acres of land, besides 120,000 acres of agricultural college lands, and a full corps of professors, is in successful operation at St. Anthony, without expense to students except for board. It has an experimental farm connected with it for instruction in scientific farming, and is to be free from denominational influences. A Normal School is in operation at Winona, and another at Mankato, and a third will soon be at St. Cloud. There is a Catholic College at Clinton, Stearns County, a Methodist College at Red Wing, a Congregational College at Northfield, an Episcopal College at Faribault, a Commercial College at St. Paul and Minneapolis, besides many other Classical Academies and Female Seminaries in different parts of the State.

CHURCHES.—*Catholic.*—123 churches, valued at $500,000, 120,000 members including baptized children, and 60 priests.

Methodist.—65 churches, valued at $228,550; 8229 members and 108 ministers, including 10 Scandinavian.

German Methodist.—35 churches, valued at $54,000; 2834 members, and 28 ministers.

Episcopalian.—28 churches, valued at $204,850; 1720 members, and 30 ministers.

Baptist.—27 churches, 4210 members, and 90 ministers.

Congregational—67 congregations, 2624 members, and 52 ministers.

Presbyterian.—(New School,) 45 churches, valued at $100,000 ; 2156 members, and 40 ministers.

Presbyterian.—(Old School,) 48 church organizations, 1384 members, and 33 ministers.

Lutheran.—79 congregations, nearly 6000 members, and 43 German and two English ministers.

Swedish Lutheran.—19 churches, 3250 members, and 9 ministers.

Universalists.—20 societies, 900 members, and 12 ministers. There are also some Adventists, Swedenborgians, Campbell Baptists, and Spiritualists.

All the churches have more organizations than church buildings, and all have worship on the extreme frontier by travelling ministers, far in advance of the building of churches.

These figures are all from the latest official reports of the churches up to 1869.

MISSIONARY OPERATIONS, AND RELIGION ON THE FRONTIER.—Nearly all the principal churches have preachers on the remotest frontier, who preach in school houses, private residences, and small churches, forming organizations in every neighborhood, and travelling over large districts to accommodate the frontier settlements.

Missions among the Indians.—As the Chippewas or Ojibwas are the only Indians now in the State, except a few scattered families, which have settled down in civilized settlements, what is here said will relate to them alone. There were for years missions among the Dakotas, and continue to be in their new locations in Dakota Territory—the last report of the American Board of Missions giving the number of communicants as 618, a

gain of 57 the past year; four native preachers and four native licentiates, besides the missionaries; the Dakotas supposed to number about 30,000, four-fifths of whom have never been reached.

We condense the following from the account of Dr. A. Barnard, resident surgeon at the Chippewa Agency at White Earth Reservation, who for the facts credits Rev. J. G. Wright, twenty years a missionary and now government teacher of a manual labor school for Indian children, at Leech Lake. From 1833 to 1862 the American Board of Missions labored among the Chippewas, since which they have abandoned them.

Rev. F. Ayer first began in 1833, labored seven years at Sandy Lake and other points, and quit; Rev. Mr. Boutwell followed, in 1835, remaining four years, and quit; in 1840 Rev. Mr. Spates, of the Methodist Church, tried it a few years, became discouraged and quit; then in 1853, Rev. Mr. Breck, of the Episcopal Church, struck in vigorously at Gull Lake and Leech Lake, erected several large buildings, labored eighteen months, and quit; in 1843, Messrs. Ayer, Barnard, Wright and Spencer went to Red Lake, and were joined by Dr. Wm. Lewis. Here was rich land, good crops of corn and potatoes, less whisky, less white men, and a better class of Indians, with some faint traces of the "noble Red Man," known in poetry and romance, and this mission continued until 1859, when it also was abandoned. Rev. Mr. Cloiter, Old School Lutheran, and Rev. Mr. Johnson, Episcopalian, at Pine River and Gull Lake labored on till 1862, and they quit. Since which nothing has been done in Protestant missions among the Chippewas, until last year Bishop Whipple concluded to renew the mission of his church, at White Earth Lake, where the Mille Lac and Gull Lake bands of Indians have been removed.

At Gull Lake and Leech Lake not less than $30,000, in addition to the missionary labor, were expended, with about the same results as at other places.

The reasons for suspending (and in the case of the American Missionary Association, abandoning) the attempt to mould anew the life of this people, are thus given by Mr. Wright: "The results were exceedingly meagre for the large amount of self-sacrificing labor and money expended.

"Individual instances of conversions there were, in which the life and death of the Christian was notably exemplified; but the mass of heathen humanity was unimpressed. Besides, the influences adverse to the success of the missionary were gradually increasing in strength.

"Suspicion of his designs was sedulously instilled into the minds of the natives. The government officials disowned any sympathy for him; and the grossly immoral conduct of a few high in office was notorious. Scarcely an effort was made by those having authority to suppress the whiskey traffic, the evils of which, together with the general licentiousness of the whites and half-breeds, inducing loathsome disease, were well nigh appalling."

In closing this synoptical account of missionary operations in this section, says Dr. Barnard: "It is but just to add that the few individuals among the Indians here at the present time who have been weaned wholly, or partially, from the degradation of the wigwam, are chiefly the fruits of that work. The employees, traders and fugitives from the restraints of civilized society form a numerous class at all our Indian Agencies, under the control of the Government Agent. Their united influence can render null, or give success, to the efforts of the missionary, who, had he been well sustained in this field, would have achieved far greater results."

Catholic Missions.—Rev. John Ireland, of St. Paul, gives the following facts:

The Jesuits have extensive missions from Grand Portage, the extreme north-eastern boundary of Minnesota, to the far Northwest in British America, their principal station being at Fort William.

Rev. John Chebus, of Bayfield, has an Indian mission at Fond du Lac, Minnesota; two clergymen are located at Pembina; Revs. Francis Pierz, Jos. Buh, and Ignatius Tomazin, at Crow Wing, from whence they make regular visits to the Indians at Mille Lac, White Oak Point, Leech Lake, Red Lake, Lake Winnebigoshish, and White Earth Reservation, at all which places there are baptized Indians. There is an excellent church edifice at Grand Portage exclusively for Indians, and a school opened this month (October, 1869) at White Oak Point. Father Ireland says: "As to the general prospects of the Indian missions, our priests express themselves in no way discouraged."

CHAPTER XIII.

INDIANS.—There have been no hostile Indians in the State since 1863, when the war with the Sioux terminated in their removal entirely out of the State. A few scattered families only of the Sioux remain. A settlement of a dozen, more or less, are within seventeen miles of St. Paul, on the Minnesota, on forty acres of land, who live by selling berries, fish and game to the whites, and the small products of their scanty industry in farming.

Of the Chippewas, there are about 6000, all friendly

Indians, principally on a reservation of thirty-six townships of rich land in Polk and Becker counties, (thirty of them in Polk,) far to the northwest, besides the Boisfort tribe, on another reservation of rice swamps and barrens, far to the northeast, above Vermilion Lake. There are a few other settlements as has just been stated, under the head of Catholic missions, in the preceding chapter. Dr. A. Barnard, Surgeon of the Chippewas, in a contribution to this book, gives the following account of these people:

Agencies and Trading Posts.—Convenient houses were built at Leech Lake in 1867 for the government employees. Number of stores, 3; saw and grist mill, 1; schools, 1; clergyman, 1; annual business, $30,000.

At Red Lake there is a Government station, trading post, and deserted mission; two stores, annual business $20,000; one saw and grist mill, a physician, miller, blacksmith, and farmer. "The decaying buildings of religious missions, now deserted, may be seen at Gull, Winnebigoshish, and Cass lakes." The principal agency and head quarters is at White Earth Lake, in Becker County, in the new reservation. $75,000 are paid annually to the 4200 Indians of this reservation, besides what is paid to the Boisfort tribe—the payments usually in September and October.

INSTITUTIONS, SOCIAL CUSTOMS, AND AMUSEMENTS OF THE OJIBWAS OR CHIPPEWAS.—The most important institution is the *Grand Medicine*—a religious, secret society, through which the weird traditions of the tribe are preserved and perpetuated; the art of healing diseases, of conjuring and magic is taught. Like the Masonic society, it has several degrees, the highest of which but few attain, who are known as "big medicine men." One aspiring to the honors of this ancient institution need only apply to these grand masters of the order, pay in goods and

provisions twenty to fifty dollars, according to the degrees conferred and the ability of the applicant, to be accepted a candidate duly prepared and suitably qualified. A long, narrow lodge is erected, a feast provided, and an invitation sent to all members in good standing, including women and children, who are eligible only to the lower degrees, to attend. Then, amid the din and confusion produced by the beating of drums, the jingling of bells, loud talking in an unknown tongue with the Great Spirit, uncouth dancing, feasting and smoking of perhaps a hundred performers, kept up till the last edible is consumed, the candidate receives that light in grand medicine which he desires. If he advance to higher degrees, he is taken by one of the big medicine men into the woods, and instructed in the properties of medicinal herbs and roots, and in tricks of legerdemain and magic. One striking ceremony in the healing of the sick is worth noting. The patient is brought into the lodge, and by a solemn rite figuratively put to death; then, by the most importunate supplications to the Great Spirit, restored to life again. Nothing among the Indians opposes so strong a barrier to the missionary as this institution. That it is, however, gradually losing its hold upon their confidence and respect is apparent to one living in their midst.

Courtship and Marriage are in the most unconventional manner. A young brave seeking a wife goes to the lodge of some fair maiden in the evening, and if he be an acceptable suitor, she shares her couch with him during the night. Should he tarry till daylight it is regarded as a *match*. Presents are usually made to the parents of the bride, and she follows her lord to his wigwam, henceforth to be his slave. Intermarriage in families related by blood is strictly forbidden.

Gambling, with the men, is the all-absorbing passion, and nothing is too valuable to sacrifice at this altar. Occasionally their wives are staked on the issue of the game. At the annual payments, when money is abundant, the common games with cards are preferred, euchre being the more frequently played. A visitor at this time may observe in the motley throng at the trader's shop little groups of men seated upon the floor, the counter, or an empty dry good's box, oblivious of the press of the crowd, the bustle of trade, with emotionless faces, intent only on the result of the play. As this is made manifest, and the winning party gathers up the large pile of scrip and greenbacks, not the faintest sigh or breath indicating a relief from suspense is heard, so well have they learned the gambler's art.

The moccasin game, being peculiarly an Indian invention, deserves to be here mentioned. Four moccasins are used, with the same number of leaden balls, one of which is marked. The two parties, seated *vis-a-vis* upon the ground, are each represented by their most expert player. Thus two only play the game, while the others take turn in beating the quick, monotonous accompaniment upon the drum, or keep the tally with bundles of small sticks. Now one of the players, with the four moccasins placed in a row before him, with a few dexterous motions hides a ball under each moccasin. Then his adversary, seated opposite with a stick in his hand, makes a feint of striking a moccasin, meanwhile eyeing intently the visage of the first player for some indication that the marked ball is under it. If in two trials he strikes the moccasin concealing the marked ball, then he has won, when the parts are reversed, and the play goes on, stimulated by the unceasing thump of the drum. Large amounts are sometimes staked at this game, and

the players, getting wrought up to the highest pitch of excitement, exhibit the twitchings and contortions of one badly afflicted with the *dance of St. Vitus*. There is also a game not unlike this in which the expertness of the player is shown by his skill in masking his own emotions, and detecting and interpreting at a glance those of his adversary. Women play at ball, and occasionally the young men, but the games of hazard are the favorite of the latter.

Religious Notions.—They believe in Ke-che Manito, the Great Spirit, and in Mu-che Manito, the Evil Spirit. The former is the author and preserver of the souls of men, and all petitions for temporal and spiritual blessings are addressed to him. Their traditions give also an account of Na-nah-bo-zho, the creator of the physical universe. The most marvelous exploits are related of this deity. Finding himself floating on a raft in a boundless sea, he sent a muskrat, his companion, on a voyage of discovery. This animal dived to the bottom of the sea and brought up a little mud in his mouth. Na-nah taking this in his hands, with a strong breath blew it far from him, when it fell upon the water and formed a small island which, by successive additions, became the habitable earth. When the work of this spirit was accomplished, he sank into a state of oblivion, and we hear no more of him.

They believe, likewise, in the existence of inferior spirits, good and bad, the latter of which they propitiate by offerings of tobacco and food. Something akin to fetichism is seen in these offerings, deposited by an oddly-shaped stone, bearing a slight resemblance to some beast, bird or fish. Of a future state they have rather vague conceptions; concurring, however, in the idea of a well-beaten trail leading across a deep river or gulf, spanned by a single tree, to the elysian fields beyond. Some of the

less adroit spirits, without regard to moral qualifications, will lose their poise in crossing this bridge, and fall into the abyss and oblivion at the same moment.

The Totem, or symbolic mark of a family, is a rude representation of some animal common to this region. It designates always persons related by blood, save in the instance of the bride's changing her totem for that of her husband. No intermarriage of those having the same mark is permitted. Pictures of the bear and martin, representing the most numerous families among the Mississippi bands, drawn with a lead pencil or wood coal upon the bark or blaze of some conspicuous tree, may be seen along the net-work of trails all through the forests of this region.

Domestic and Social Life.—The life of the Ojibwa woman, if she be a wife, is one of constant, diversified toil and drudgery, enlivened by no hope of something better. In the spring she repairs to the "sugar bush," and in her thin moccasin makes through the deep melting snows a trail from tree to tree, by which the sap is carried in birchen buckets to the wigwam for boiling. The sugar having been manufactured and put up in fancifully ornamented muk-kuks of bark, a removal is made to the fish ground, and a supply of fish secured by the aid of nets. In June the birch tree yields its bark for the construction of the canoe; and the corn and potatoes must be planted and cared for.

The warmer months succeeding are occupied with the holiday work of gathering wild berries. September brings the harvest of wild rice, threshed from the stalk with clubs, into the canoe, hulled and fitted for food with much labor. With the frosts of autumn the long winter hunt for furs commences, and she must accompany her husband and master to do his bidding till another spring renews

the round of toil. Sometimes the husband assists a little in this work, but it is regarded as belonging properly to the wife. The time not occupied in these duties is devoted to the lighter household work, the making of moccasins, beaded ornaments, &c. Occasionally she indulges in some simple games of amusement. But with the burden of all these cares upon her, she, true to her nature, finds ample opportunity to gratify the social propensity for gossip. In the warm weather a frequent scene is a bevy of Indian women seated on a grassy plot, engaged in diverse occupations. Two or three are shaping the canoe from the pliant bark. Others are making the ornamented moccasin, or belt. Another still is rubbing vigorously a deer skin, stretched upon an upright frame of poles, into flexibility and softness; while Nocomis, the old grandmother, is cleaning fish. In the work of their hands there is no harmony; but their glib tongues inspirited by the occasion, slide easily into the same groove, and the common thread of gossip and story bind them, for the hour, in sweet concord of thought and feeling. The Indian husband, when not on the hunt, devotes his time to gambling, smoking, lounging about the trader's shop and Agency, importuning for tobacco and food. Occasionally, to break the monotony of so dull a life, he joins in a war party to the distant land of the Sioux. The scene witnessed every day at this Agency, of the woman staggering under the weight of a huge bundle of household goods and papooses, and the man, with only a gun, complacently strutting along a little in advance, faithfully illustrates the respective social condition of the sexes.

CHAPTER XIV.

SCENES ON THE FRONTIER.—*Forty Miles North of Otter-tail Lake.*—"Carleton," of the *Boston Journal*, was in July, 1869, one of the Pacific Railroad exploring party. Speaking of what he saw in the vicinity of Detroit Lake, he says:

Ascending a hill, we came in sight of a settler, a pioneer who is always on the move; who, when a settler comes within six or eight miles of him abandons his home and moves on to some spot where he can have more elbow room, to a region not so thickly settled.

One of our party had already come up with the pioneer, who informed him that we should find the old trail we were searching for about half a mile ahead. He had long matted hair, beard hanging upon his breast, a wrinkled countenance, wore a slouched felt hat, an old checked cotton shirt, and pantaloons so patched and darned, so variegated in color that it would require much study to determine what was the original texture and what was patch and darn. He came from Ohio in his youth, and has always been a skirmisher on the advancing line of civilization—a few miles ahead of the main body. He is thinking now of going into the "bush," as he phrased it.

Settlers further down the trail informed us that he was a little flighty and queer, that he could not be induced to settle down, but was always on the move for a more quiet neighborhood.

Pioneer Settlement.—Four families have made a beginning at Detroit Lake, in which the Red River of the North has its rise.

We reached the settlement on Saturday night, and pitched tents for the Sabbath. It was a rare treat to these people to come into our camp and hear a sermon from Rev. Dr. Lord. The oldest of the colony is a woman now in her eightieth year, with eye undiminished, a countenance remarkably free from the marks of age, who walks with a firm step after fourscore years of labor. Sixty years ago she moved from the village of

Lebanon, New Hampshire, a young wife, leaving the Valley of the Connecticut for a home in the State of New York, then moving with the great army of emigrants to Ohio, Illinois, Missouri, and Iowa in succession, and now beginning again in Minnesota. Last year her hair, which has been as white as the purest snow, began to take on its original color, and is now quite dark. There are but few instances on record of such a renewal of youth.

The party have come from Central Iowa to make this their future home, preferring the soil and climate of this region to one where the changes of temperature are sudden and variable. The women and children of the four families lived here alone for six weeks, while the men were away after their stock. The nearest neighbors are twelve miles distant. On the Fourth of July all hands—men, women, and children—traveled forty-five miles to celebrate the day.

"We felt," said one of the women, "that we couldn't get through the year without going somewhere or seeing somebody. It is kinder lonely so far away from folks, and so we went down country to a pic-nic."

Store, church, and school are all forty miles away, and until recently the nearest saw mill was sixty miles away. Now they can get their wheat ground by going forty miles.

The settlement is already blooming with half a dozen children. Other settlers are coming in, and these people are looking forward to next year with hope and confidence, for then they will have a school of their own.

Chippewa Indians.—In our march south from Detroit Lake we met a large number of Chippewa Indians going north to the land recently assigned them by the government, in one of the fairest sections of Minnesota. Among them we saw several women with blue eyes and light hair and fair complexions, who have the blood of *la belle France* in their veins, and possibly some of them may have had American fathers. Nearly all of the Indians wear pantaloons and jackets, but here and there we see a brave who is true to his ancestry, who is proud of his lineage and race, and is in all respects a savage, in moccasins, blanket, skunk-skin head-dress, and painted eagle's feathers.

They are friendly, took no part in the late war, are inoffensive and indolent. They have been in close contact with the whites for a long time, but they do not advance in civilization.

A Band of Music.—At Rush Lake, near Ottertail, the party camped, and were talking and jesting before the camp fire at night, when he says:

But music is not wanting. We hear martial strains—of cornets, trombones, ophicleide and horns, and the beating of a drum. Torches gleam upon the horizon, and by their flickering light we see a band advancing over the prairie. It is a march of welcome to the Northern Pacific exploring party.

Not an hour ago these musicians heard of our arrival, and here they are, twelve of them, standing in a circle round our camp, doing their best to express their joy. They are Germans, all young men. Three years ago three or four families came here from Ohio. They reported the soil so fertile, the situation so attractive, the prospects so flattering, that others came, and now they have a dozen families, and more are coming to this land of promise.

Now just ride out and see what they have done. Here is a field containing thirty acres of as fine wheat as grows in Minnesota. It is just taking on the golden hue, and will be ready for the reaper next week. Beside it are twenty acres of oats, several acres of corn, an acre or two of potatoes. This is one farm only. On yonder slope there stands a two-storied house, of hewn logs and shingled roof. See what adornment the wife or daughter have given to the front yard—verbenas, petunias and nasturtions—round the door a living wreath of morning glories.

Cows chew their cuds in the stable yard, while

"Drowsy tinklings lull the distant fold"

where the sheep are herded.

We shall find the scene repeated on the adjoining farm. Sheltered beneath the grand old forest trees stands the little log church with a cross upon its roof, and here we see coming down the road the venerable father and teacher of the community, in a long black gown and broad brimmed hat, with a crucifix at his girdle. It is a Catholic community, and they brought their priest with them.

But take a good long look at these men as they stand before our camp fire, with their bright new instruments in their hands. They received them only two weeks ago from Cincinnati.

"We can't play much yet," says their leader, Mr. Bertenheimer—"but we do the best we can. We have sent to Toledo for a teacher who will spend the winter with us. You will pardon our poor playing, but we felt so good when we heard you were here looking out a route for a railroad, that we felt like doing something to show our good will. You see we are just getting started and have to work hard, but we wanted some recreation, and we concluded to get up a band. We thought it would be better than hanging round a grocery. We havn't any grocery yet, and if we keep sober, and give our attention to other things, perhaps we shan't have one, which I reckon will be all the better for us."

Plain and simple the words, but there is more in them than in many a windy speech made on the rostrum or in legislative halls. Just getting started! Yet here on the frontier art has planted itself. The flowers of civilization are blooming on the border.

As we listened to the personal strains, and watched the receding forms, and looked into the coals of our camp fire after their departure, we felt that there must be a bright future for a commonwealth that could grow such fruit on the borders of the uncultivated wilderness.

Woman's Rights on the Frontier.—The Model Farm of the "Seven Sisters."—Sixty miles from St. Paul, out on the Pacific Railroad, at Darsel Station, in Wright County, in the Big Woods, seven miles from the prairie, is the farm of the "Seven Sisters," which is thus sketched in Robertson's *Monthly*. They live in a log building which the neighbors helped them to build.

The out houses for horses, cattle, pigs, poultry, and smoke house, and the fields and fences, all indicate that the occupants of this homestead excel in husbandry and know how to live. Their farm contains 160 acres. Two years ago last April they secured here two homesteads of 80 acres each, under the homestead law, and have since cleared forty acres, all of which is now in crop. Of their crop of last year, besides what was consumed in the family, they sold 900 bushels of potatoes, 500 bushels corn, 200 bushels wheat, 250 bushels turnips, 200

bushels beets, 1100 heads cabbage, and over $200 worth garden stuff. The potatoes they sold for fifty cents per bushel. We forgot to ask what they received for the other products.

All the work on this farm, the clearing and grubbing the land, the fencing, sowing, planting, cultivating and harvesting, and taking care of the stock, and all other work excepting splitting the rails and breaking and plowing the cleared land, was performed by the seven sisters.

These ladies are natives of Ohio, whence they emigrated to this State three years ago, and to this farm, then wild land, in April, 1867. The family consists of the seven sisters, the youngest aged 15 years, the eldest about 25, their mother, and their father an invalid. The family removed to this State with the hope of improving his health, and this spring, for the first time in many years, he is able to assist in farm work. In the course of conversation on the management of this model farm, the mother, a fine-looking old lady, remarked: "The girls are not proud of the hard work they have had to do to get the farm started, but they are not ashamed of it. We were too poor to keep together and live in a town. We could not make a living there, but here we have become comfortable and independent. We tried to give the girls a good education. They all read and write, and find a little spare time to read books and papers."

CHAPTER XV.

GOVERNMENT LAND FREE OF COST.—HOW MUCH STILL OPEN TO ENTRY AND THE TERMS.—In 1867 the amount of government land still unclaimed, was 36,776,171 acres. In 1870 there are still over 30,000,000 acres. The Homestead Law of 1862 gives 160 acres of land, free of cost, to actual settlers who will reside on the land five years, whether they are foreign or native, male or female, over

21 years old, or minors who have served 14 days in the army or navy. Foreigners must declare their intention to become citizens. A father may enter 160 acres for himself, and each grown child 21 years old may enter 160 more.

A decision of the General Land Office, in 1867, declares that unmarried women, whether heads of families or not, may pre-empt 160 acres of land if they will in good faith reside on it.

Land taken under the Homestead Law is not liable for any debts contracted before the patent issues.

PRE-EMPTION CLAIMS.—The same parties named above can "claim" 160 acres of land under the Pre-emption Law; and by making some little improvement on it, such as building a cabin and breaking a small tract, may secure the *prior right to buy*, at $1.25 per acre, over all others, when the land comes into market. As this may not occur for many years after the claim is made, settlers very often live on their farms, free of cost, for years, and when called on to pay the $1.25 per acre, find the land is actually worth $10 to $12 per acre.

The $1.25 may be paid in cash, land warrants, or agricultural scrip, and may not really cost the purchaser over 90 cts. or $1 per acre.

The lands are also sometimes purchased in advance of coming into market or being surveyed, with half-breed scrip.

WHERE GOVERNMENT LANDS TO BE HAD.—LOCATION OF THE LAND OFFICES AND ADDRESS OF THE OFFICERS.*

Land Office at Alexandria, Douglas County. L. K. Aaker, Register; J. H. Vandyke, Receiver.

* Reported by the Land Officers especially for this book.

County.	Acres still vacant.	County.	Acres still vacant
Douglas	250,000	Pope	435,000
Grant	295,000	Polk	2,480,000
Ottertail	857,000	Becker	435,000
Wilkin	652,000	Pembina	2,263,000
Clay	695,000	Traverse	652,800
Stevens	285,000		

Land Office at Greenleaf, Meeker County. J. M. Waldron, Register; J. C. Bradon, Receiver.

County.	Acres still vacant.	County.	Acres still vacan t
Renville	20,000	Lac Qui Parle	52,000
Chippewa	90,000	Redwood	260,000

This includes only surveyed lands—a very small portion of the whole amount vacant.

Land Office at St. Peter, Nicollet County. Tillson Tibbets, Register; J. C. Rudolph, Receiver.

County.	Acres still vacant.	County.	Acres still vacant.
Lincoln	31,760	Cottonwood	12,800
Renville	39,440	Murray	134,680
Brown	15,360	Redwood	139,840
Total	373,880 surveyed. 921,600 unsurveyed.		

Land Office at Jackson, Jackson County. J. B. Wakefield, Register; E. P. Freeman, Receiver.

County.	Acres still vacant.	County.	Acres still vacant.
Martin	75,000	Cottonwood	50,000
Jackson	150,000	Nobles	125,000
Watonwan	7,000	Rock, entire	(not surveyed.)

The above includes only surveyed lands.

Land Office at St. Cloud, Stearns County. C. A. Gilman, Register; H. C. Burbank, Receiver.

Stearns County, 50,000 acres.
Todd, 125,000 good, 125,000 second rate, mixed with pine, &c.
Pope, (see Alexandria District also,) 25,000.
Chippewa, (see Greenleaf District also,) 20,000.
Stevens, nearly all.
Morrison, 100,000 good farming and stock, and 100,000 second rate, like Todd.

Benton, 15,000 first rate.
Sherburne, (see also Taylor's Falls District,) 10,000 acres fair, brush and oak openings.
Monongalia, 15,000; and
Wright, 5000.
Cass, Itasca and Beltrami, entire, and Crow Wing and Wadena nearly so. Much good pine and cedar land.

Land Office at Taylor's Falls, Chisago County. J. P. Owens, Register; L. K. Stannard, Receiver.

County.	Acres still vacant.	County.	Acres still vacant.
Chisago.....	11,688	Isanti.....	60,428
Pine.....	73,314	Sherburne.....	21,088
Kanabec	63,985	(See St. Cloud also.)	
Mille Lac	31,006	Anoka	25,504

Land Office at Duluth, St. Louis County. Address "Register" or "Receiver" at Duluth.

Nearly all of this district is still vacant, embracing St. Louis, Lake, Carlton, and Aiken.

NOTICE.—The above vacant lands were taken directly from the books of the land offices up to the latest dates, from Sept. 1st to Nov. 8th, 1869, (the St. Cloud report being dated Nov. 8th,) except the Taylor's Falls report, which was made in June, 1868. They reveal the fact that good level stock farms, with fair soil, far superior to much that is farmed in the Eastern States, are still to be had, free of cost, in the counties of Anoka, Sherburne, and others, immediately adjoining Hennepin and Ramsey, of which St. Paul and Minneapolis are county seats, and easily accessible by rail in one hour's ride from either. The quality of the lands can be seen by reference to the counties in Part Second.

THE BEST WAY TO SECURE GOOD CLAIMS.—Besides an inquiry at the land office, in person or by letter, an application to the settlers in the neighborhood selected will often reveal the fact that many excellent claims that have

been filed on have never been occupied, or if occupied have been abandoned. The papers on the frontier are full of notices to such claimants, that the claim is contested and trial ordered at the land office. The cost of these trials adds $10 or $15 to the original entry fee.

How and When New Land is Plowed, and the Cost. —The prairie breaking costs $2.75 to $3 per acre; oak openings, timber, or brush land, $5 to $8, according to the amount of "grubbing" to be done (contract prices.)

Time to break prairie, June and July preferred—the sod not rotting so well earlier or later. In strictly timbered land, without the tenacious sod, earlier or later breaking will do. The farmer may break for himself at less cost. Two yoke of oxen or two span of horses working abreast, with "eveners" or double trees, with a 12 or 14-inch plow, and one man to manage, will break from an acre to an acre and a half per day. This presupposes the land to be grubbed. If not, a heavier plow and from three to six yoke of oxen are required, according to the size and number of grubs—also an extra hand to drive. On the prairie a much lighter team will answer. With an 18 or 20-inch "rod plow," with a rolling cutter, three yoke of oxen will break from three to four acres per day.

In the "brush" a favorite mode of managing is to cut down the smaller brush with a brush hook, in July or August, and grub the larger grubs, and in the fall or spring burn over the ground. After which a 16-inch plow, with a common coulter and two or three yoke of oxen, will turn it over easily.

The ordinary method among the Minnesota farmers is for neighbors to *join teams* and break for each other—exchanging work. Thus the expense of an extra team

is avoided, and poverty supplemented and made richer by the social and neighborly character of the settlers.

When and How the New Land is Planted.—Unless it is the first year, and the farmer requires to plow in May and plant for his living, no small grain is planted, but corn, potatoes, ruta bagas, broom corn, or corn for fodder. The potatoes are *plowed in*, the corn inserted in the sod, in an opening made by an axe or other implement. The only cultivation is generally by a cultivator or hoe. The crop is generally more than sufficient to pay for the breaking. Two or three inches is the depth preferred for new breaking, the object being to rot the sod. By the next spring the land is in order for a wheat crop, which is sowed with or without further plowing, as the farmer prefers. If cross-plowed, a heavier crop pays for the labor.

Fever and Ague.—In almost every new country this is so apt to be the scourge of the new settler, that we place it under this head, rather than its generic head of "Healthfulness of the Climate." *It is unknown here unless imported.* In fourteen years' residence here the writer has never known a farmer to have ague and fever. As far back as 1823, Long's official report of the Minnesota Valley says: "Our party continued all in health except one of the soldiers, who had a few chills and fits of fever which were soon checked. It was supposed that he had *brought the seeds of it* from the Mississippi." Long's journey to the Minnesota Valley was through *Illinois*.

Prices of Lands.*—In almost any county in the State wild lands held by speculators may be purchased at from $2 to $5 and $10 per acre—part cash, and 3 to 5 years'

*See "Counties" and Cards of Railroad Companies.

credit; railroad lands within six miles of any of the railroads, from $4 to $10—small cash payment and 5 to 10 years' credit; school lands in almost any of the oldest settled counties, at $5 to $8—fifteen per cent. cash, and credit to suit—not over 20 years. Seven per cent. interest on deferred payments, on any class of lands.

The average assessed value of all the taxable lands in the State, in 1868, was $3.83. Average rate of assessment about half the cash value.

CHAPTER XVI.

FISH AND GAME.—NATURAL HISTORY.—BOTANY.

FISH AND THE FISHERIES.—*Number of Lakes.*—We stated in a preceding chapter that there were 1000 to 2000 lakes in the State. We have since, for curiosity, counted those marked on the small sectional maps in each county, and find that there are over 2650;* and from conversation with a government surveyor, we learn that it is not the habit of the surveyors to meander around small lakes of 40 acres or less, and they do not generally appear on the map. How many there are not appearing on the map may be estimated by the fact that in Ramsey County, credited with twenty lakes on the maps, there are actually 125 marked on a large map of that county. If other counties show the same proportion, the estimate of Schoolcraft, which has generally been regarded as a great exaggeration, that there were ten thousand lakes in

*The numbers are given in all the counties except the first four or five.

the State, is not much, if at all, out of the way. The value of these ten thousand lakes for fish, stock, bathing, pleasure, landscape beauty, and the climate is inestimable. From letters from almost every county in the State the same report has come of the abundance of fish in all the streams and lakes, "fish inexhaustible," "a world of fish," "fish by the wagon load." Instead of reiterating the same story in every county, we make this general statement as applicable to about every county in the State. They are caught in immense quantities, winter and summer.

Varieties.—Pickerel, pike, black and rock bass, and sun-fish are the leading varieties; there are also muskelonge, perch (striped, yellow and white,) buffalo, trout (2 kinds,) suckers (red horse and white,) bullhead and cat, chubb or jack salmon, stickleback, herring or skipper, sheep's head, gar fish, rock fish, white fish in Red Lake, Sandy Lake, Ottertail, and other northern lakes, and Lake Superior white fish, Lake Superior dog fish (3 feet long,) siscowit, salmon or Mackinaw trout, carp (several kinds,) croppies, pumpkin seed, dace (2 kinds,) devil fish or sculpin, lamprey eels, and common eels. The trout are most numerous on the Mississippi tributaries from St. Paul to the Iowa line, and in all the little streams emptying into Lake Superior.

Lake Superior Fisheries.—The principal fish in Lake Superior are the trout, white fish and siscowit. The pike and pickerel in the spring, and white fish in the fall, run up St. Louis River from the lake to the falls and are caught in great quantities, as high as 250 barrels some seasons.

"As a resource of trade and commerce, the fish of Lake Superior will become an item of both luxury and value. The trout, siscowit and white fish are taken in all seasons of the

year fresh from the pure, cool depths of the lake; they excel in flavor, size and delicacy anything of the kind taken elsewhere from salt or fresh water. Those caught from November to March, and frozen, may be taken with all their freshness to every table in the Mississippi Valley; but as a salted commodity, their value in trade is inestimable. Whatever may be the demand, the supply can be made to meet it.

"Two men, with a gang of 100 fathoms of nets, take from two to five barrels of fish a night; almost the entire Minnesota coast of 150 miles is one fishing ground; each mile or even half mile of it may be occupied by a gang; the seasons best adapted for fishing are from September to February, and May to July, amounting to half the year. Ten thousand barrels would be a moderate estimate for the annual product of Minnesota alone, when the needed facilities shall be furnished to take them to the markets of the Mississippi Valley."*

GAME.—Wild ducks and geese, snipe, swans and pelicans are abundant in spring and fall; prairie chickens, pheasants and quails, in their season; and deer are so abundant as to sell lower than beef in the St. Paul market. The black bear, grey wolf, fox, raccoon, mink, otter and wild cat are found on the frontier, and all the fur-bearing animals are abundant. The buffalo is in the Red River Valley. The field, forest and lake are not only useful for the sportsman, but a never failing resource to the frontier settler, who can *live* by them, with a small amount of labor to secure his bread, potatoes, and the products of the dairy. Even near St. Paul there are men who make their living as *hunters*. Trapping is profitable further out on the frontier.

Varieties of Birds.—Owen's Report speaks of "95 varieties of birds that breed in the country,"—meaning Minnesota and Wisconsin.

Among these are the following—the classes separated by a dash.

* Clarke's Geological Report.

The golden eagle, bald eagle,—hawks (3 kinds,)—owls (3 kinds,)—whip-poor-will, night hawk,—martin, swallows (3 kinds,)—cedar bird,—belted king fisher, humming bird,—nut hatch (white breasted,)—wood wren, mocking wren, short-billed wren,—black cap tit,—blue bird,—brown thrush, cat bird, robin, wood thrush, hermit thrush, the oven bird,—yellow throat, golden-winged warbler, spotted warbler, spotted Canada warbler, black burnian warbler, summer yellow bird, chestnut sided warbler,—American red start, wood pewee, king bird, great crested king bird,—red-eyed greenlet, yellow-crested chat,—butcher bird,—blue jay crow, black bird, golden oriole, red-winged oriole, yellow-headed black bird, cow bunting, boblink,—rose-breasted grosbeak, long and white throated sparrow, goldfinch, ground robin, indigo bird, black-winged red bird,—woodpecker (red headed, hairy, downy, yellow bellied and golden winged,)—black-billed cuckoo,—wild pigeon, Carolina turtle dove,—wild turkey (only on the Upper Iowa,)—quail, partridge or ruffed grouse, prairie hen,—plover (king, Wilson's and golden,) and great blue heron,—lark, tattler, gray plover, tell tale, marlin, sora rail and coot,—white pelican, black tern,—wild goose, mallard, wood duck, teal, hooded shelldrake, great loon, and several other kinds.

Botany.—The same authority gives a list of 727 plants in 106 natural orders, found in the Northwest—nearly all common to Minnesota—38 different species of ferns alone.

Among these are an endless variety of flowers and roses, making the State, in the summer, one vast flower garden; plants useful for their medicinal virtues, wild fruits and berries of almost every variety, and roots and herbs used by the Indians as articles of diet. Among the latter are the wild rice, Indian turnips, making a light,

starchy flour; staff tree or climbing bitter-sweet, boiled to a pulpy consistence and eaten; Pomme de Terre, or wild potatoe, common artichoke and swan potatoe. Several shrubs are used for tea, and the kinnikinnick and other shrubs for smoking.

Among the medicinal roots, ginseng has been exported in large quantities. Spikenard and wild sarsaparilla, liquorice, mandrakes, and many others are common.

It would be interesting to make a more special mention of the vast number of plants, useful and ornamental, abounding in the State, and to give the suggestions of botanists as to their cultivation and appropriation to the uses of civilization, but the limits of this book will not admit of it, and we must be satisfied with the suggestion to our agricultural editors to take Owen's report, look over the list, translate the scientific Latin terms to popular comprehension, and make this important part of his report of practical importance to Minnesota. In another edition the writer may enlarge upon the subject, and attempt the task himself.

CHAPTER XVII.

BANKS, INSURANCE COMPANIES, TELEGRAPHS, STAGES, BENEVOLENT ASSOCIATIONS, STATE LAWS, TAXES, PUBLIC LIBRARIES, ETC.

BANKS.—There are seventeen National Banks, with a capital of $1,780,000, and more than this number of private banks, with capitals ranging from $25,000 to $100,000 each, making the total banking capital considerably over $2,000,000. The National Banks stood as follows, Oct. 9th, 1869:

LOCATION.	Loans and discounts.	Capital stock.	Undivided profits.	Deposits.
Austin	$40,636 90	$50,000 00	$2,588 12	$33 357 33
Faribault	46,057 11	50,000 00	1,682 63	35,574 91
Hastings, 1st Nat.	151,451 82	100,000 00	21,782 92	50,024 53
Hastings, Mer. of Hast.	109,111 16	1[illegible]0,000 00	10,895 48	54,910 30
Mankato	101,733 96	60,000 00	5,255 24	50,758 07
Minneapolis, 1st Nat.	248,233 65	50,000 00	6,626 15	331,883 85
Minneapolis, Nat. Ex.	243,470 80	70,000 00	8,796 34	239,348 20
Minneapolis, State Nat.	149,604 22	100,000 00	8,742 93	123,638 66
Red Wing	66,378 79	50,000 00	8,[illegible]08 67	37 637 26
Rochester	133,024 41	50 000 00	10,391 48	84,988 51
St. Paul, 1st Nat.	783,527 00	600,000 00	82,346 00	487,004 00
St. Paul, 2nd Nat.	239,784 81	200,000 00	15,319 17	252,290 09
St. Paul, Nat. Marine	155,992 01	100,000 00	5,275 59	99,194 08
Shakopee	43,024 48	50,000 00	1,536 96	28,512 07
Stillwater	168,753 06	50,000 00	5,236 65	155,475 72
Winona	140,695 90	50,000 00	4,853 83	106,364 50
Winona	88,859 27	50,000 00	2,223 68	86,234 71
Total of 17 banks, 1869.	$2,913,349 35	$1,780,000 00	$210,561 84	$2,156,6[illegible]3 23
Total of 15 banks, 1868.	2,471,236 20	1,659,300 00	202,933 78	2,258,369 66

RESOURCES, 1869—17 BANKS.

Loans and discounts	$2,913,349 35	Due from other banks and bankers	$95,865 57
Overdrafts	67,182 96	Real estate, furniture and fixtures	142,874 26
U. S. Bonds to secure circulation	1,713,200 00	Current expenses	45,600 29
U. S. Bonds to secure deposits	306,000 00	Premiums	24,264 00
U. S. Bonds and securities on hand	22,050 00	Checks & other cash items	93,540 50
Other stocks, bonds, and mortgages	75,649 85	Bills of National Banks	52,844 00
Due from redeeming agents	179,820 01	Bills of State Banks	176 00
Due from other National Banks	163,854 55	Fractional currency	18,365 61
		Specie	7,826 27
		Legal tender notes	483,526 00
		Three per cent. certific'tes	35,000 00
			$6,440,989 22

LIABILITIES.

Capital stock	$1,780,000 00	Deposits of U. S. disbursing officers	$148,949 99
Surplus fund	286,042 31	Due to National Banks	106,905 60
Undivided profits	201,561 84	Due to other banks and bankers	25,248 39
National Bank notes outstanding	1,495,310 00	Notes and bills rediscounted	82,300 00
State Bank notes outstanding	2,254 00	Bills payable	55,220 30
Individual deposits	2,156,613 23		$6,440,989 22
U. S. deposits	100,583 56		

INSURANCE.—Forty Fire and Marine companies report for taxation gross receipts for insurance, for 1868, $392,-146.57, the two State companies not reporting. The

Home, of New Haven, reports $41,524; Hartford, $37,-444; Home, of N. Y., $36,463; Ætna, $33,667; Security, N. Y., $31,760; Phœnix, Hartford, $25,407; Putnam, Hartford, $20,578; North American, Philadelphia, $15,-240; Republic, Chicago, $12,949; Enterprise, Cincinnati, $13,642; Lorillard, N. Y., $12,834; International, N. Y., $10,105.

Forty-one Life companies reported $285,360.91 gross receipts. Northwestern Mutual, Milwaukee, $74,769; Mutual of New York, $45,100; Ætna, Hartford, $25,802; Knickerbocker, N. Y., $21,182; Connecticut, $17,709; Phœnix, Hartford, $15,102; Universal, N. Y., $14,533; Mutual, Chicago, $9095. Only one State Life Company is about being organized.

Considerable sums have been sent direct to companies out of the State for fire insurance, which does not appear in the above reports. These reports being made for taxation, must be understood and estimated accordingly.

Benevolent Associations.—There were in the State, up to January, 1869, Masons, 5000; Odd Fellows, 17 lodges and 939 members; Good Templars, 8161; Patrons of Husbandry, about 2000. A deaf and dumb asylum at Faribault, a State reform school at St. Paul, two orphan asylums, two associations for the elevation and help of women, besides local associations throughout the State without number.

State Debt and Taxes.—"The recognized funded debt of the State is $300,000 ($100,000 a loan for war purposes and $200,000 for charitable institution buildings.) Taxes levied for 1869, for general revenue, 3 mills, and for interest and sinking fund, 1 mill each. This levy would amount to $375,000."—*Governor's Message*, 1869.

County taxes vary from 1 to 2 per cent.; school tax, 2 mills.

PUBLIC LIBRARIES.—*The State Library and Historical Society*, located at St. Paul, each have well-filled rooms at the Capitol, and are open daily to the public. The Historical Society has 3100 bound volumes, 5200 pamphlets, 233 maps, a number of portraits, engravings, bound newspapers, and a fine cabinet of Indian curiosities. President, Geo. A. Hamilton; Secretary, J. F. Williams.

See "St. Paul," Part Second, for the St. Paul Library Association.

There are similar libraries in other principal cities.

TELEGRAPHS AND STAGES.—Telegraphic connection with all points East and South exists in all the Mississippi River towns, and Stillwater, and with all the towns on the railroad lines, as far as finished; also with Duluth, Lake Superior. Stages run as far west as Fort Abercrombie, on Red River, and Jackson County; and as far north as Fort Ripley and Duluth, connecting with the railroads at all points.

STATE LAWS.—*Property Exempt from Execution.*—A homestead of eighty acres and improvements in the country, or one house and lot in town, without regard to area or value; also $500 of furniture, besides all wearing apparel, beds, bedding, and bedsteads, stoves, and cooking utensils; wagon, cart, or dray, two plows, harrow, sleigh, and other farming utensils, not exceeding $300 in value; three cows, ten swine, one yoke of oxen and a horse, or a span of horses or mules, 20 sheep, twelve months' provisions for family and stock, and fuel for twelve months; a mechanic's tools and $400 stock-in-trade, and the library of a professional man.

Provided, however, that none of this property is exempt from execution on a suit for the purchase money of the same, or from mechanics' or other liens for labor or materials in making or repairing the same.

Redemption of Property Sold.—Real estate sold under execution or mortgage may be redeemed in twelve months, by paying the debt and 7 per cent.

Foreclosure of Mortgages may be made by advertisement in six weeks, or by suit at law.

Pleading.—The New York code has superseded the common law system of pleading.

TAXES.—*Lands Sold for Taxes.*—Taxes are due in January and February. If not paid by March, 5 per cent. penalty is added. If not paid by June, the property is sold. If sold, it may be redeemed in two years, on payment of 24 per cent. per annum interest.

RIGHTS OF MARRIED WOMEN.—Married women are entitled to as full rights of property as if single, and both their property before and after marriage and the avails of their industry or business are free from the control of their husbands or liability for his debts. They may contract and be contracted with as single women, except in relation to real estate. This is by act of March, 1869.

USURY AND INTEREST.—Legal interest is 7 per cent., but 12 is good if contracted for.

CHAPTER XVIII.

COST OF LIVING—PRICES CURRENT—WAGES—A TALK WITH FARMERS, MECHANICS, INVALIDS, TOURISTS AND OTHERS.

COST OF LIVING,—At St. Paul (November, 1869) beef, by the quarter, costs 7 and 8 cts.; steaks and roasts, 15 to 18; pork, 8½ to 10; steaks, 18 to 20; mutton, 15 to 20; hams, 20 to 25; venison, 8 cts., by the quantity; steaks, 18; chickens, 12½ to 15; turkeys, 15 to 18; fish, 5 to 15; lard, 20 to 25; flour, $5 per barrel; meal, 4 cts.; buckwheat flour, $1.50 per sack; butter, 25 to 30 cts.; cheese, 20; eggs, 35 per dozen; potatoes, $1 per bushel; ruta bagas, 35 cts.; onions, 75 cts.; beans, $1.45 to $2.50; cranberries, $1.75 to $2.50; sugar, 14 to 16 cts. per lb.;

coffee, 22 to 28; tea, 90 cts. to $1.80; wood, $6 to $7.50 per cord. Rents, $3 to $15 per month for cottages; $15 to $50 for larger houses. Board, $1 to $3 per day; $4 to $6 per week, day board; $4 to $10, board and lodging; lower in smaller towns.

Dry Goods.—Calicos, 8 to 12½ cts.; brown sheetings, 12½ to 16; bleached cotton, 13 to 18; brown shirtings, 10 to 14; domestic ginghams, 14 to 17; blankets, $3.50 to $9 per pair; grey, 50 cts. per lb., &c.

Cost of Building.—Comfortable and neat frame cottages, 4 or 5 rooms, $600 to $800, and upwards; houses, 5 to 10 rooms, $1000 to $3500, and upwards, according to style and finish.

Lumber, $15 to $45 per M; fencing, $17; shingles, $3 to $4.50; dimension, $17; plastering, 30 cts. per yard; 2 coats painting, 18 to 24 cts. per yard; nails, 5 to 7½ per lb. Masonry, $2.00 to $3.50 per perch.

Building Associations.—To aid men of limited means in building, a Building Association is organized at St. Paul, and if encouraged by suitable legislation, as in the Eastern States, similar associations will spread all over the State, which will enable their members to build houses by paying annually, for 8 or 9 years, about the same amount annually paid for rent.

Wages.—Carpenters, $2 to $3; masons, $3.50 to $4.50; painters, $2 to $3; laborers, $1.50 to $2; and by the month, $20 to $25, on farms; $35 to $60, on boats and in the pineries; servants, $8 to $15; clerks, $500 to $1800; teachers, $300 to $1500.

The above figures are for St. Paul. Some of them vary in other localities. Lumber is $2 or $3 lower in some places and in others higher. Fuel is lower generally. But these prices give a fair idea of the general range.

Prices of Grain and Produce.—Wheat here, as all over the country, has declined. In August it was generally about $1. In December, 1869, it varies from 50 cts. to 75, according to advantages of locality—50 cts. being the lowest for No. 2 spring wheat in interior counties. It will not do to calculate on these prices as permanent.

They have not been so low for 7 or 8 years, and cannot last. Oats, 40 and 45 cts.; corn, 50 to 55; shelled, 85 and 90; barley, 70 and 75; rye, 55 and 60; hay, $16 and $18 per ton, (generally $8 to $12;) wool, 40 cts. These are St. Paul prices.

FREIGHTS AND FARES.—Have ruled about as follows, during the past season: St. Louis to St. Paul, 25 to 50 cts. per 100 lbs. for freight—$8 to $20 for fare. Chicago to St. Paul, 45 cts. to $1 per 100 lbs. for freight—$10 to $18 for fare; wheat, 10 to 22 cts. per bushel. New York to St. Paul, $20 to $40 for fare. Fare between New York and Liverpool, $30 to $100; Bremen, $42 to $125; Christiana, $40 to $135, in currency.

These freights will be reduced as our railroads to Lake Superior are opened, and water communication with Lake Michigan by the Wisconsin and Fox River improvement is completed. In the meantime Winona has just inaugurated the system of barge transportation, greatly reducing the price of freights.

COST OF OPENING FARMS.—(See page 177.) *Fencing* is generally done with posts, and 3 rails thinned at the ends and nailed.

In the prairie districts the townships require hogs to be "fenced in," so that 3 rails make a fence against cattle. A fence around 40 acres takes 1700 rails, 550 posts and a keg of nails—costing 22 days' work for the rails and posts and $6 for the nails. Instead of digging holes the posts are generally sharpened and driven with a maul or sledge. Two men will do this work with great rapidity.

Teams, Utensils and Stock.—Cost of oxen, $125 to $150 per yoke; horses, $100 to $175; cows, $20 to $50; wagon, new, $75; plow, $12 to $20; breaking plow, $35.

The Farm House.—The new comer is always welcomed by the neighbors, and the rearing of the new home made an easy task.

"*Bees*," on the principle of the old time "quiltings," bring out a large force, and whether a house is to be raised, or plowing, or husking, or any "emergency" is to be met, it is a *courtesy* of the woods and prairies of Minnesota to go to the rescue and give the needed help free —a keg of beer, or other spirituous consolation, or a dance and liberal fare, paying all expenses. In the absence of money—a very common circumstance—work pays for work, and is the only currency required except in a busy season.

Winter Work.—If the farmer does not have work of his own in the dairy, among his stock, getting out rails, cord wood or other timber, marketing his produce, fencing, building barns, hauling manure, wood, or otherwise, he obtains work in the pineries, on the railroads, making or hauling ties; in the cities or towns, or with his richer neighbors; or he hunts game, catches fish, traps the fur-bearing animals, and thus makes the long bright winter pay him as well as the summer.

INVALIDS, if consumptives, should not come in the fall of the year or the winter. The middle of May is the best time for them. They thus avoid the raw, damp chill of our spring weather—like March in the Eastern and Middle States—and the too sudden and stimulating tonic air of winter. The soft and healing summer air, with its gentler tonic gradually increased with the Indian summer of October and November, prepares the system for the rousing exhilaration of our zeros and forties below. The summer sunshine, the fishing, boating, riding, hunting, and other out-door exercises, give to the summer additional advantages in building up the system for the more powerful winter treatment. Arrived in the State, they will find their wants and necessities anticipated by good hotels, rural retreats on the margin of fishing lakes, physicians competent and educated, with years of

experience in their professions here and elsewhere, bathing establishments, and other conveniences.

The writer knows of invalids who camp out on the shores of our lakes, build their cabins, and with dog, gun, and fishing tackle, casting off the shackles of society, live year after year in this free, independent and romantic style, and not only grow strong and robust, but bring in their wagon loads of fish, venison, and other game, sell them, and exchange for groceries and other necessaries and luxuries of the table, and thus pay expenses and make a good living.

TOURISTS.—In addition to the general descriptions of scenery on pages 85 to 91, and the mention of places in the counties, tourists will have no difficulty in hearing of scores of places to visit, lakes or streams for fishing, caves, mounds, cascades, and other objects of interest in almost every county, by inquiring at the hotels or the picture galleries in the larger cities, where nearly 500 views will be photographed, and on exhibition in 1870.

CAPITALISTS AND BUSINESS MEN.—To the question, how can money be used to advantage? the answer is, look at the growth of the State and the counties and towns. The land worth a dollar an acre soon becomes the town lot, worth a dollar a foot. Look at the increase of wealth, and figure the per centage. Counties with 3000 to 5000 population to-day had not a settler five years ago.

These 3000 to 5000 people need mills, stores, hotels, agricultural implements, dwelling houses, manufactories, newspapers, capital to develope the country, banks, wheat buyers, &c. And while 12 per cent. is the maximum legal interest, men make quadruple this by investments in real estate, improved with stores, dwellings, or farms, and rented.

Do you ask if there is an opening for your business?

Whether there is to-day or not, the next wave of immigration will make an opening. Enough people come to our large cities every year to make a good lively town of themselves.

Our farmers have not the capital to raise stock. A large stock farm among our fine meadow lands would make a fortune to a man of capital. We import our beeves from Illinois. We have a home market. See pages 103 to 114.

Capital is scarce, and in demand. Two per cent. per month is freely paid on the frontier, and amply secured. It can be loaned indirectly, or used so as to net far more than this. It is loaned freely in the largest towns at 12 per cent., free of commission, by responsible agents, secured by productive real estate, worth double the loan.

To Immigrants of all Classes.—We say, finally, come and see for yourselves. It will not do to believe disparaging reports you may hear from the interested agents of rival States and land-jobbing monopolies, nor even the croaking account of some disappointed visitor, whose dyspeptic views are often due to the fact that he could not enter government land in the suburbs of St. Paul, Minneapolis, or Winona; or that he found himself among a people too intelligent and shrewd to promote him to honors or positions for which he was unqualified; or that the climate was not sufficient to clothe his dead bones with new life, after he had "had his day," and while he persisted in the violation of every law of health.

It will cost but a trifle to come and see for yourselves, and to this test we confidently commit

"Minnesota as it is in 1870."

For progress of railroads, immigration, and general growth of the State and counties during 1869, see page 275, &c.

PART SECOND.—THE COUNTIES.*

AIKEN COUNTY.

Not organized: no population: valuable for pine lumber, and similar to Mille Lac county agriculturally.

ANOKA COUNTY

Has a light, sandy, quick and productive soil, better adapted to stock growing than to the production of the cereals; a scattered growth of burr oaks and swamp tamaracs; lies generally level, with small prairies; finely

* EXPLANATION.—The statistics of crops, land cultivated, live stock, and assessed property in all the counties are taken from the official returns of the assessors of the counties, and represent about a half or one-third of the full value of property. They are very unreliable as indications of the actual amount of land cultivated or of crops produced—not being full, and no compensation being allowed for this part of the assessor's duties. The figures might in nearly all cases be doubled, and would then be a nearer approximation to the actual facts. They are faithfully given, however, as returned, with this explanation.

For brevity's sake we use the word "scholars," instead of "persons between 5 and 21 years;" "mules," instead of "mules and asses;" "school lands," instead of "school lands still unsold;" "homestead lands," instead of "lands held under the homestead laws."

watered by Rum River, Coon, Cedar, Trott, and smaller creeks, and clear lakes in every township. Fine natural meadows; good water power, at Anoka and St. Francis. Population, 1857, 1000; 1860, 2110; 1865, 2260; 1869, about 3600; largely American, some Canadian French, Irish, Swedes and Germans. Land cultivated, 1857, 2854 acres; wheat raised, 1144 bushels; taxable lands, 1868, 133,220 acres. Live stock: horses, 598; cattle, 2296; sheep, 2544; hogs, 605. Total taxable property, 1868, $798,370; increase since 1860, $287,630; real, $561,602, and personal, $236,768; average value of land per acre, $2.52. Persons between 5 and 21 years, 1110; year's increase, 38: 15 school houses, costing $10,740.

Out of about 272,000 acres of land in the county, only 129,324 are returned for taxation in 1868—15,125 acres school lands, a large amount owned by the Pacific and Superior Railroads and some government lands not being taxable.

Towns and Villages.—Anoka, the county seat, handsomely situated on a level plain, on both sides of Rum River, 18 miles north of St. Paul by railroad, is a very active and lively manufacturing town of about 1500 inhabitants, 258 families, "25 of which live in rented houses," 14 stores, 1 hotel, 1 flouring mill, 3 saw mills, 1 sash, door and planing mill, 1 furniture manufactory, 2 furniture stores, 1 wagon maker and 4 blacksmiths, 3 physicians and a good supply of mechanics—no lawyer.

Lots from $50 to $400; hard wood, $2.50 to $3 per cord. Business: over 6,000,000 feet of lumber shipped in 1868, and 70,000 bushels of wheat manufactured.

Churches.—A Methodist, Universalist, Congregationalist, Baptist, Catholic, and Episcopalian, standing numerically in the order named. Good Templars, 200; Masons, about 100.

CENTREVILLE, 15 miles from St. Paul, 2 miles from railroad; 500 population, mostly French, some Germans and Americans, and others. 1 store, 1 saw mill, 1 hotel, Catholic Church, fine school house, near "Rice Lakes," and the township "affords the finest fishing and hunting in the State," and "has excellent soil."

ST. FRANCIS has a large saw mill and flour mill, 1 store, hotel, blacksmith and wagon shop, and fine water power.

Columbus, Bethel, Oak Grove, Ramsey, and Grove each have a post office and school; sparsely settled. Post offices at Oak Springs, Linwood, and Itasca.

BELTRAMI, CASS, WADENA, AND ITASCA COUNTIES.

Dr. A. Barnard's description of these, under the head of "Northern Minnesota," makes a repetition here unnecessary. He gives the population as "exclusively Indians, of the Chippewa nation, half-breeds, and a few white employees of the government. Population of the first two classes, 4200, by enrolment in 1867." For more as to the Indians, missionaries, &c., see under this head in preceding pages.

Post offices at Leech Lake and Chippewa.

BECKER, POLK, AND PEMBINA COUNTIES.

These counties partake of the description of the rich Red River Valley. Like the last-named, they are still unorganized and wild. Dr. Barnard says: "By treaty of 1867, thirty-six townships of timbered and prairie land, of unsurpassed fertility, were set apart in Becker and

Polk counties for an Indian reservation, and suitable appropriations made to encourage these Indians to adopt the habits of civilized life."

The east half of Pembina is represented as an impassable swamp. (For description of Becker and Polk, see page 39, Part First.)

BIG STONE AND TRAVERSE COUNTIES.

Fine rolling prairie, soil good, timber scarce—some around the lakes; water in the small lakes generally not very good. A post office at Lake Traverse, and about 100 settlers in the county.

BLUE EARTH COUNTY.

One of the best agricultural counties. Area, 482,000 acres, of which 381,801 are taxed, 36,280 held under the homestead law, and about 90,000 under cultivation. About one-third timber, balance level prairies; abundant natural meadows of red top, blue joint, and ordinary wild hay; 30 lakes, 3 or 4 rivers, and numerous creeks. Soil, a rich, black vegetable mould, with clay subsoil; fine water powers; 25 or 30 saw and grist mills; plenty of lime stone, sand stone, brick and potters' clay, clay for paint, and several red and white chalk beds.

POPULATION.—1852, 10; 1853, 100; 1855, 416; 1857, 3629; 1860, 4828; 1865, 9201; 1869, 17,000. About one-half Americans, quarter Germans, balance mostly Welsh, Irish, Norwegians, Scotch, and others, in the order named.

STATISTICS.—1868, horses, 3700; cattle, 9835; mules, 55; sheep, 8060; hogs, 3357; carriages, 179; watches,

463; pianos, 26; merchandise, $129,127; money and credits, $136,923.

INCREASE OF WEALTH.—Personal property, 1860, $99,-945; 1868, $1,051,329: real, 1860, $736,345; 1868, $2,659,087. Live stock, 1860, horses, 182; cattle, 960; sheep, 109; hogs, 612.

LANDS, SCHOOLS, CHURCHES, &C.—4535 acres school lands unsold; railroad lands, $5 to $10 on long time; improved, $15; wild, $3 to $10; timber, from $10 to $30. Average value of lands, as assessed, $5.34. Schools, 121; scholars, 5210; year's increase, 840; school houses, 77; value, $31,558. Churches, about 15; organizations, over 30. Masons, 1 lodge; Good Templars, 3 or 4.

TOWNS AND VILLAGES.—MANKATO is the county seat, with a population of about 3500 — about two-fifths Germans, balance mostly Americans. Being located at the practical head of navigation for most of the boating season, 80 miles by rail from St. Paul, and 150 from Winona, and at the junction of the railroads from St. Paul, Winona, Sioux City and the Iowa line, the river outlet for the southwestern counties, with a rich and growing country tributary to it, it promises to be a place of some importance. With 2 flouring and 3 saw mills, 1 sash and blind factory, 3 steam furniture factories, and several run by horse power, a foundry and machine shop, stave and barrel factory, capacity 500 per day, woolen factory, pottery, fanning mill and agricultural implement factory, an oil mill, pump and plow factories, breweries, tanneries, brick and lime kilns, wagon shops and other factories, its manufactures amounted in 1868 to $282,000. With 13 dry goods stores, 12 grocery, 3 furniture, 4 jewelry, 3 drug, 3 clothing, 2 shoe, 4 hardware, 2 book, 2 auction, 3 provision, and other stores and shops, its mercantile business amounts to about $800,000 per annum.

In 1867, 81 buildings were erected, including 26 business houses and 2 churches, costing $173,600; in 1868, buildings were erected costing $140,725.

The N. S. Presbyterians, Episcopalians, Methodists, Baptists, Lutheran, Calvanistic Methodists and Catholics have churches costing over $25,000. The Catholics are erecting a church to cost $75,000. The O. S. Presbyterian, German Evangelical and Universalist churches worship in a hall.

There are 3 weekly newspapers, 5 practicing physicians, and 12 practicing lawyers. Suits on the calendar, about 50; new appearances, 25. Minneineopa Falls, rivalling Minnehaha in beauty, is one mile from South Bend. A windmill here grinds 150 bushels of wheat per day.

Garden City has 800 or 900 inhabitants, 3 flouring mills, a fine water power, 2 drug and grocery stores, 4 dry goods and general merchandise, a tin and hardware store, the various mechanical shops, Baptist church and weekly newspaper.

The following are small villages or settlements:

Vernon Centre, with a hotel, 2 stores, grist and saw mill, Methodist and United Brethren churches, blacksmith and shoe shop. South Bend, a hotel, 3 stores, 2 saw mills, 2 churches, Presbyterian and Congregational, wagon and blacksmith shop, &c. Winnebago Agency, 2 hotels, 3 stores, wagon and 2 blacksmith shops, 2 steam saw and 1 grist mill, cooper shop, brick kiln, 2 saloons, good water power and considerable trade. Shelbyville, a hotel, 2 stores, 2 steam and 1 water saw and grist mill, and blacksmith shop. Judson, 2 stores, shops, and churches. Mapleton, a store. Winfield, a store and large steam saw and grist mill. Chrystal Lake is also a new town on the railroad just beginning.

Post Offices.—Beauford, Butternut Valley, Decorah,

Garden Prairie, Iceland, Liberty, Loon Lake, Maple River, Medo, Perch Lake, Pleasant Mounds, Sherman, Sterling, Tivoli, Watonwan, Willow Creek.

BENTON COUNTY,

Eighty miles north of St. Paul. Excepting three or four townships of rather light soil, this is a well watered, well timbered and good farming county, with most of the land good, fair soil, and several townships first quality. Its natural meadows are excellent and abundant. It has been kept back by a large portion of its lands being owned by non-resident speculators.

STATISTICS.—Area 253,440 acres; taxable, 132,070; school, 13,250; homestead, 12,400; under cultivation, 1869, 1239; some government land yet unclaimed; wild land, $2.50 to $10 per acre; assessed value, $2.04; personal property, 1868, $90,378; real, $327,478. Number of horses, 264; cattle, 843; mules, 16; sheep, 449; hogs, 167. Wheat, 1867, 7389 bushels; carriages, 52; watches, 49; pianos, 5. Schools, 10; school houses, 5; scholars, 449, year's increase 111. Merchandise, $5475; moneys, &c., $6196. Population, 1860, 628; 1865, 505; 1869, 1500, half American, balance German, Irish, French, &c., in the order named. Vote for Grant, 153; Seymour, 147.

VILLAGES.—SAUK RAPIDS, 2 miles above St. Cloud, on the river and railroad, 82 miles north of St. Paul, the county seat, has about 500 population, 2 hotels, 6 stores, 2 churches, 2 lawyers, 1 doctor, shops, saloons, &c. The water power is being improved by the railroad company, and will be for rent.

WATAB has a steam saw mill and 5 houses and an extensive formation of granite adjoining.

POST OFFICES.—Langola, Maywood, Sauk Rapids and Watab.

BROWN COUNTY,

Next west of Blue Earth, and similar in agricultural advantages, has an area of about 322,000 acres, 111,338 taxed, average value, $2.25 per acre. School lands, 9051; homestead, 36,280; under cultivation, 1867, 8886; large area of railroad lands; 20 large lakes. Population about 5000; one-half German, one-quarter Americans, balance Scandinavians, Irish and others. School houses, 17; scholars, 1488; increase one year, 245. Wheat product, 1867, 58,019 bushels. Horses, 1868, 864; cattle, 3825; mules, 18; sheep, 1445; hogs, 719; carriages, 10; watches, 69; pianos, 3; merchandise, $33,750; money and credits, $19,142. Total personal property, $235,411; real, $413,314; increase since 1860, $291,158; population 1860, 1595. Prices of lands, $5 to $10 for wild, $10 to $20 for improved. Vote for Grant, 654; Seymour, 152.

NEW ULM is a town of about 1800 population,—principally Germans—has a Catholic, Methodist and Lutheran church, a large brick school house and a Turner Hall, 3 hotels, 6 dry goods stores, 3 hardware and agricultural implements, 2 brick yards, an extensive pottery, 2 steam saw and grist mills, a weekly paper, &c., &c. Its fur business in 1868 amounted to $50,000.

POST OFFICES.—Milford, Leavenworth, Golden Gate and Backsville.

CARLTON COUNTY,

Not organized, but has a population of about 100. Thickly wooded, fine natural meadows, 20 lakes, and some good farming land, but chiefly valuable for its slate quarries, described in Part First of this book, and for its pine lumber—principally located on the St. Louis and Nemadji rivers. Plenty of government land still vacant, and convenient by rail to Lake Superior—only about 15 miles from its east line. See Pine County also.

CROW WING AND CASS COUNTIES.

For Cass, see Beltrami. Crow Wing partakes of the character of Cass somewhat, in being not well adapted to agriculture. Dr. Eames, State Geologist, says: "From the mouth of Prairie River to Crow Wing, the bottom lands of the Mississippi are extensive and appear well adapted for cultivation, having generally a substratum of clay overlaid by eight inches of vegetable humus supporting a dense growth of oak, elm and ash." The most fertile part of the county—60,000 acres—is held as a military reservation. Population, 1860, 190; 1865, 178; 1869, estimated at 400, a majority half-breeds of the Chippewa race. Taxable lands about 500 acres—260,000 in the county—personal property, 1867, $22,203; horses, 56; cattle, 173; hogs, 43; carriages, 8; watches, 12; pianos, 2. The map shows 340 lakes in these two counties, and 100 in Becker and Beltrami.

VILLAGES.—CROW WING is the only town, and has 2 churches, Catholic and Episcopalian, 2 stores, 2 groceries, 2 hotels, blacksmith shop, &c.

CARVER COUNTY.

One of the "Big Woods" counties, which means one of the richest in the State—some prairies in the Southern part—60 lakes and plenty of running water. About 40 miles from St. Paul on the Minnesota River. Population 1860, 5106; 1865, 8704; 1868, 10,000 or more; 1869, about 12,000, five-eighths Germans, two-eighths Swedes and Norwegians, one-eighth Americans and Irish. Assessed property, 1860, $464,095; 1865, $714,041; 1867, $1,068,969; 1868, $1,405,194. Schools, 60; scholars, 4090; year's increase, 245; school houses, 40; value, $13,071. Horses, 1341; cattle, 8350; mules, 25; sheep, 4082; hogs, 4488; carriages, 284; watches, 78; pianos, 9; merchandise, $33,321; money and credits, $19,073. Vote for Grant, 800; Seymour, 980.

Building material mostly lumber and brick, 12 or 14 saw and grist mills, 13 churches, area about 243,000 acres, taxed, 203,016; homestead, 10,136; school, 1400; some railroad and a little government land. Land under cultivation, (1867) 16,310; wheat raised, 168,301 bushels. Prices of school lands, $5 to $10; railroad, $3 to $10; farms, $10 to $25 according to improvements.

Towns and Villages.—Chaska, the county seat, has about 1200 inhabitants, 5 general stores, 1 drug, 1 hardware, 1 shoe store, 2 large flouring mills, one steam, with a capacity of 125 barrels per day, 2 large brick churches, Catholic and Moravian, a Lodge of Good Templars, 2 doctors, 2 lawyers, 2 clergymen, 1 weekly paper, with a number of shops, &c. A million bricks are exported annually, and an immense trade done in wood, hoop poles, wheat, barley, and flour.

Carver is 2 miles above Chaska, on the river, and has 800 inhabitants, half German, balance Swedes, Norwe-

gians, Americans and Irish. It has 7 dry goods, grocery and provision stores, 2 hardware and 2 drug stores, 2 doctors, 2 lawyers, 3 churches, Catholic, Lutheran, and German Evangelical, and mechanical shops. It ships 7 or 8000 cords of wood, over 100,000 bushels of wheat and other exports, valued at $275,000. The town wants a wool carding factory, brewery and distillery, and a tailor. Good water-power within 2 miles of town.

WACONIA, on Waconia Lake about 10 miles around, 11 miles from Chaska and Carver, has about 300 population mostly Germans; a Catholic and Lutheran Church; 3 stores; 1 brewery; saw and grist mill; hotel; shoe, harness, blacksmith and wagon shops; and is adapted to tourists and invalids on account of the abundance of fish and game and the beautiful lake.

WATERTOWN, on the Crow River, has 500 population—German, American and Irish—a few Swedes; a Protestant Church, 5 stores, 1 brewery, 1 drug store, 2 hotels, 2 saw and 2 grist mills, 2 blacksmith and wagon shops, a Masonic Lodge, and is a lively business town.

YOUNG AMERICA, 16 miles from Carver, has about 200 population—Germans, Americans, and Irish; 3 stores, 2 hotels, Catholic Church, brewery, and shops. Good location for a physician. Land worth from $3 to $10 per acre.

BENTON, between Carver and Young America, has a hotel, 2 stores, Catholic Church, and shops.

POST OFFICES.—Laketown, Oberle's Corners, and Redfield.

CHISAGO COUNTY,

On the St. Croix River, had a population in 1860, of 1751; 1865, 2175; 1869, about 3600; fully half Swedes,

balance Americans, with a few Irish and Germans. About half of the county is heavily timbered with hard wood. The balance, though not prairie, has only a scattering growth of scrub oak, or pine, with some dense thickets of small poplars intermingled with hazel brush. General surface level, diversified by 30 odd beautiful lakes, also by cranberry and tamarac marshes and natural meadows. The soil is variable; in some parts, especially among the timber, it is of the first quality, a deep, rich, black loam, with clay subsoil. In other parts it is light and sandy, the county generally being better adapted to grazing than grain growing. The best lands are in Chisago Lake, Franconia, a portion of Taylor's Falls and Rushseba townships. Over 2 townships in Rushseba (north part of the county) are heavily timbered and one of the best tracts of country between the Mississippi and Lake Superior. Area about 288,000 acres; taxed, 187,137; assessed value per acre, $2.38; school land, 13,482 acres; some railroad lands; about 10,000 acres government land open to entry; land under cultivation, 1867, 3113. Wheat raised, 1867, 15,259 bushels; personal property, 1868, $286,480; real, $627,478. Number of horses, 438; cattle, 2689; mules, 12; sheep, 1491; hogs, 887; carriages, 28; watches, 95; pianos, 7; merchandise, $27,472; money and credits, $69,863; school houses, 20; scholars, 1119, increase in a year, 133; taxable property, 1860, $599,314, increased to $913,958. Vote for Grant, 538; Seymour, 117.

Towns and Villages.—Taylor's Falls, incorporated in 1858, has a population of 550 or 600. 4 general stores, 2 groceries, a drug store, and stove store sell annually $150,000 worth of goods, this being the supply depot for lumbermen. There is a saw mill, a boat yard, carding mill, 3 churches, 1 lawyer, 2 doctors, Masonic and Good

Templars lodge, land office and usual mechanics. The water-power of the St. Croix Falls is second only to St. Anthony Falls. The fall in half a mile is 30 feet, while to the foot of the rapids (5 miles) it is estimated at 80 feet, all of which can be made available. A wealthy company, headed by Caleb Cushing, of Mass., has purchased an immense tract of land opposite Taylor's Falls, with a view to improving and using the water power.

Good brick clay is abundant, and building stone is found near the St. Croix. The Superior Railroad runs the entire length of the county, and a branch from this place is projected.

CHISAGO CITY, the county seat, has a good hotel, store, extensive stave factory, population of 75, and is located in the woods, between 2 very fine fishing lakes—a resort for invalids.

FRANCONIA, 2 miles below Taylor's Falls, population 100, has 2 stores, sales $30,000; flouring mill, saw mill, stave factory, starch factory, and exports about $35,000 of staves and heading, stave bolts, rafting material, wood and lime.

WYOMING is a village on the railroad, with a hotel, store and several houses.

SUNRISE is a growing town of 2 stores, 2 grist and 1 saw mill, a number of mechanics and several families.

POST OFFICES.—Muskootenk, Stark, Rushseba, Chisago Lake, and Rush Creek Station.

CLAY COUNTY,

On the Red River, partakes of the character of the Red River Valley—a rich and productive county, nearly all still open to settlement. A small village, Georgetown, and a score or two of settlers in the county.

CHIPPEWA COUNTY.

(ALSO RENVILLE, LAC QUI PARLE, BIG STONE, TRAVERSE, AND LINCOLN.)

All accounts agree as to the remarkably fine character of the soil and the rich vegetation of this entire region —nearly the whole of it still open to the settler. There is a scarcity of timber, the whole being generally level or rolling prairie, with timber only around the lakes and on the water courses. It has over 70 large lakes.

Lac Qui Parle is described by Capt. Joseph Anderson, who traversed this entire region during the Indian war as an officer in the Mounted Rangers, and before and since in the way of business, as "rolling prairie, with timber on the Chippewa, Pomme De Terre, and Minnesota rivers, sufficient for the county. On the different water courses there are sites unsurpassed for farms in any country." Other accounts speak of this whole region as having a soil of great depth, and grasses so rank as to hide cattle and horses when grazing. Embracing an area as large as some entire States, it awaits the coming of the homestead settler.

VILLAGES. — CHIPPEWA CITY, at the junction of the Minnesota and Chippewa rivers, in Chippewa County, and BEAVER FALLS, in Renville, are the principal settlements.

Birch Coolie, Herzhorn, and Sacred Heart are post offices in Renville, Hawk Creek in Chippewa, and Traverse in Traverse.

STATISTICS OF RENVILLE COUNTY.—340 votes cast for President in November; large immigration since; population probably 1600. Lands taxed, over 10,000 acres; held as homestead, 1900; personal property, $130,254; horses, 239; cattle, 1535; mules, 5; sheep, 439; hogs,

156 ; carriages, 29 ; watches, 41 ; merchandise, $11,074 ; money and credits, $7279 ; real estate, $157,527. Vote for Grant, 273 ; Seymour, 67.

COTTONWOOD COUNTY

Is the second west from Blue Earth, has 20 townships of rich and desirable farming land, which is almost every acre open to the settler, except some of the alternate sections owned by the Sioux City and St. Paul Railroad, which passes through the county. Over 36 lakes, and numerous streams.

DAKOTA COUNTY,

Immediately south of Saint Paul, with an area of about 384,000 acres, is one of the best agricultural counties in the State ; being mostly rich, level prairie, with abundant wood along the streams, within convenient distance of every township ; well watered with a dozen lakes, and streams of living water ; with abundant natural meadows. The northern portion, bordering the Mississippi and Minnesota, is broken, and mostly second rate land, oak openings. Fine meadows on the Minnesota River and in Ravenna, Randolph, Hampton, Waterford, Greenvale, Castle Rock, Eureka and Vermilion townships.

STATISTICS.—Population, 1860, 9058 ; 1865, 12,476 ; 1869, 20,000 ; assessed property, 1860, $1,999,943 ; 1865, $2,377,930 ; 1868, $3,939,170. Nationality, Americans, 7000 ; Germans, 4000 ; Irish, 5500 ; Scandinavians, 1500 ; French, 2000. Land taxed, 352,967 acres ; average value, $6.12 ; school land, 3971 ; land under cultivation, 1867, 61,119 ; wheat raised, 871,627 bushels ; school houses,

1868, 81; value, $52,444; scholars, 5666, increase in a year, 389. Horses, 4901; cattle, 8527; mules, 106; sheep, 4798; hogs, 3986; carriages, 711; watches, 405; pianos, 53; merchandise, $115,560; money and credits, $91,214. Vote for Grant, 1613; Seymour, 1793.

Towns and Villages.—Hastings, the county seat, is beautifully located on the Mississippi, at the mouth and adjoining the Falls of the Vermilion River, has about 4500 population, her vote in November, 1868, being 844. Being the river outlet for a rich, level back country, and the terminus of the Hastings and Dakota Railroad, a large business centres here.

The shipments of wheat in 1868, were 920,000 bushels. There are 9 dry goods stores, 13 groceries, 2 book, 3 hardware, 13 boot and shoe dealers, 1 wine and liquor, and 1 leather dealer, 7 clothing, 4 drug, 4 furniture, 3 jewelry, 3 saw, 2 flouring and 2 planing mills, 4 agricultural implements, 1 fanning mill, 1 plow and 4 wagon manufactories, 2 auctioneers, 5 barbers, 2 bakers, 2 billiard saloons, 2 breweries, 2 foundries, 2 commission merchants, 11 hotels, 5 real estate and 5 insurance agents, 7 doctors, 10 lawyers, 2 national banks, 4 eating houses, 2 dentists, 2 livery stables, 2 lumber yards, harness, gun, tin and other shops, besides churches of the principal denominations.

Farmington, located at the junction of the St. Paul and Milwaukee and the Hastings and Dakota railroads, is a 4 year old town of about 500 population, with 7 dry goods and general stores, 2 drug, 1 furniture, 1 hardware, 3 tailor shops, a shoemaker, milliner, 2 lawyers, 4 doctors, saddler, watch maker, lumber yard, 5 saloons, a lodge of 250 Good Templars, restaurant, wagon and blacksmith, and machine and other shops, lodge of Masons, a Presbyterian, Methodist, Baptist and Episcopalian church.

MENDOTA, the oldest town in the State, opposite Fort Snelling, was a trading post of the American Fur Company in 1828. Gen. H. H. Sibley, since Governor, erected a store in 1834. There are now 2 hotels, 2 stores, a number of shops, a Catholic church and a population of about 300, mostly French and Irish.

From Pilot Knob, in its vicinity, is a splendid view of St. Paul, St. Anthony and Minneapolis and the country for 20 miles distant.

ROSEMOUNT has a good hotel, 3 or 4 stores, a saloon, several shops, a doctor, &c.; Methodist church near.

NININGER was a village of 500 population ten years ago—a paper town. Now it has little left but the name, a good grist mill and a few houses.

LAKEVILLE has a store and several houses.

WEST ST. PAUL, opposite St. Paul, has a hotel, 5 stores, and about 250 population.

CHURCHES.—There are about 18 churches in the county, besides those in Hastings.

POST OFFICES.—Besides the villages named, are Castle Rock, Christiana, East Castle Rock, Empire City, Hampton, Lewiston, New Frier, Pine Bend, Rich Valley, Waterford.

DOUGLAS COUNTY.

With an area of 460,000 acres or 20 townships, 99,557 were taxable in 1868. This is one of Pope's "Garden Spot" counties. Soil, rich vegetable loam, 1 to 3 feet deep, underlaid with sand and gravel, three-fourths gently rolling prairie, one-fourth timber well distributed. There are one or two forests from 6 to 10 miles wide and 10 to 12 long. Lakes, 120 in number, and unsurpassed for beauty; for fish and game, "unrivalled in the

world except by its neighboring" Garden Spot counties. Rapidly settling, but still thousands of acres free to settlers. Its vote for President was 668—has now nearly 5000 population—4 years ago was a wilderness with scarcely a settler, if one. Vote for Grant, 562; Seymour, 106.

Assessed property, 1868, $416,040; value of land per acre, $2.04; number of horses, 396; cattle, 1808; mules, 14; sheep, 673; hogs, 201; carriages, 42; watches, 94; merchandise, $21,475; money and credits, $11,412. School districts, 17; houses, 6; scholars, 378; increase in a year, 239. Nationality, largely Norwegian and Swedish, with one-third Americans, and a good number of Irish and Germans.

VILLAGES.—ALEXANDRIA, the county seat and principal town, has 13 stores, 5 hotels, 1 church, 4 saloons, a livery stable, steam saw and flouring mill, billiard hall, land office, 2 wagon and blacksmith shops. Lots sell from $25 to $300. Land in vicinity, $5 to $15.

BRANDON, OSAKIS, and EVANSVILLE have each 2 stores and a hotel; and Holmes City 1 store and a hotel and church. Lots $25 to $50; land near, $3 to $10 per acre.

POST OFFICE at Chippewa Lake.

DODGE COUNTY.

Area, 270,000 acres, about four-fifths prairie; good land. Population: 1860, 3798; 1865, 6222; 1869, 8500; vote, Nov., 1868, 1406; about 6000 Americans, 1200 Germans, 500 Irish, 500 Norwegians, and 300 others. School districts, 59; houses, 47; value, $27,495; scholars, 1868, 3041; increase in a year, 205. Land assessed, 233,883 acres; value per acre, $4.46. School land, 2900 acres;

homestead, 6840 acres; land under cultivation, 1867, 39,296; wheat product, 296,609 bushels. Assessed property, 1860, $590,679; 1868, $1,602,599; personal property, $532,690. Number of horses, 2664; cattle, 6208; mules and asses, 44; sheep, 5102; hogs, 1739; carriages, 124; watches, 172; pianos, 18; merchandise, $47,560; money and credits, $62,350. Vote for Grant, 1025; Seymour, 381.

VILLAGES.—MANTORVILLE, the county seat, has about 1000 population, 10 or 12 stores, 3 flouring mills, a brewery, churches, hotels, and the various mechanical shops. The railroad passes several miles south of it. It has a weekly paper.

KASSON has about 500 population, is located on the railroad; has a weekly paper.

DODGE CENTRE, CONCORD, WASIOJA, ASHLAND, RICE LAKE and CLAREMONT, are small villages.

POST OFFICES at Berne, Avon, Ellington, Milton, Union Spring and Vernon.

FILLMORE COUNTY,

Only 25 miles from the river on the Iowa line, having an area of over 500,000 square acres, is one of the banner agricultural counties. Organized in 1854, its population was, in 1858, 11,000; 1860, 13,539; 1865, 17,524; 1869, 24,000; a little over half Americans, a quarter Norwegians, 1200 Germans, 1200 Irish, and 1600 others. Vote for President, 4060; Grant, 2748; Seymour, 1312. School districts, 157; houses, 123; value, $67,291; scholars, 1868, 8312; increase for the year, 1322. Soil a rich sandy loam, 2 to 4 feet deep; surface, about seven-eighths rolling prairie and one-eighth timber. The central portion and along Root River is hilly and wooded.

Lands taxed, 515,072 acres; value per acre, $4.83; school land, 3850; homesteads, 3080; under cultivation, 1867, 131,990. Wheat product of 1867, 1,167,783 bushels; assessed property, 1855, $350,000; 1857, $1,606,000; 1860, $2,102,116; 1865, $2,375,501; 1868, $3,734,512. Number of horses, 1868, 6600; cattle, 16,383; mules and asses, 107; sheep, 13,330; hogs, 8735; carriages, 375; watches, 292; pianos, 20; merchandise, $120,654; money and credits, $156,606.

The Root River, its three branches, and Iowa, besides smaller streams, afford an unusual supply of water-power, much of which is improved. Price of lands, $10 to $20 per acre for improved, $5 for wild. Fifteen or 20 flouring and saw mills; stone, brick and lumber for building; fuel, $2.50 to $5 per cord; lumber, $30 to $50 per M.; 22 churches in the county, 2 Catholic, 6 Norwegian Lutheran, 4 Baptist, 3 Methodist, 2 Congregational, 3 N. S. Presbyterian, 1 Episcopalian and 1 Universalist.

Villages.—The principal town, Rushford, on the railroad, 30 miles west of the Mississippi, with a population of about 1600, has 6 dry goods stores, 9 groceries, 2 hardware, 1 book, 5 boot and shoe, 2 clothing, 1 foundry, 2 flouring mills, 1 saw mill, 5 hotels, 7 saloons, 1 woolen factory; a Congregational, Methodist, and Norwegian Lutheran church; lodges of Masons, Odd Fellows, and Good Templars; a weekly newspaper; a good water-power, and is a growing town.

Chatfield, 25 miles west, with a population of about 1400, has 7 dry goods and grocery stores, 1 hardware, 1 clothing, 2 drug, 2 boot and shoe, 1 furniture, 1 book store, 2 saw mills, 2 flouring mills, 1 woolen factory, fine water-power on Root River; a Methodist, Baptist, Congregational, Episcopal and Catholic church; lodges of Masons and Good Templars; a bank doing an exchange

business of $480,000 per year, and a weekly paper. Building in 1868 to the amount of $50,000; mercantile and mechanical business $215,000; flour and woolen manufactures, $150,000.

PRESTON, the county seat, in the centre of the county, a mile or two from the railroad, with a population of about 800, has 3 dry goods, 9 grocery, 2 drug, 2 hardware, and 2 boot and shoe stores, 2 hotels, 2 saloons, a flouring mill and woolen factory, carriage shops, furniture establishments, a weekly paper, a Catholic and 1 Presbyterian church in the town and 1 in the township, a Universalist and Methodist organization and Masonic lodge.

LANESBORO, on the railroad, 7 or 8 miles east of Preston, laid out in July, 1868, is a year old town of 500 population, with a fine water-power, stores, mills, &c., also a weekly paper.

SPRING VALLEY, with 400 population, has 4 dry goods, 1 drug, 1 hardware, and 1 grocery store, 2 hotels, an iron foundry, good water-power, 3 saw mills, 1 grist mill, pump and fanning mill factories, a Methodist and Congregational church, 4 lawyers, 2 doctors, 2 agricultural yards, a Masonic lodge and no saloon. "Saloon men cannot live in Spring Valley."

FILLMORE is a flourishing village with stores, mills, a Presbyterian church, &c.

GRANGER, CARIMONA and FORESTVILLE do a good business with stores, mills and other establishments. Carimona has a Baptist church, and Forestville a circle of Spiritualists.

LENORA, NEWBURG and ELLIOTA are places of some trade. Lenora has a Methodist church, Newburg a Norwegian Lutheran, and Elliota a Second Advent organization.

POST OFFICES.—Alba, Arandahl, Belleville, Big Spring,

Bristol Centre, Bratsberg, Canfield, Carrolton, Cherry Grove, Etna, Ettaville, Fairview, Farmers' Grove, Free Soil, Hazel Prairie, Hamilton, Highland, Kedron, Pilot Mound, Prosper, Washington, Watson Creek, Waukokee.

FREEBORN COUNTY,

On the Iowa line, 90 miles from the Mississippi, with an area of 460,800 acres, organized in 1856; population, 1860, 3334; 1865, 5688; 1869 over 9000; vote, Grant 1211; Seymour, 336; nationality half American, three-eighths Norwegian, one-eighth Irish, English and Scotch, with a few Bohemians and Germans.

School districts, 85; houses, 59; scholars, 3125; year's increase, 334; assessed property, 1860, $334,729; 1868, 1,204,733; land assessed, 253,060 acres; value per acre, $3.24; homesteads, 44,586 acres; school, 18,612; railroad, 56,000; under cultivation, 1867, 20,796; wheat product, 1867, 167,956 bushels; prices of lands, wild $5 to $10, near the villages. The county is gently undulating, soil of excellent quality, one-fourth clear prairie, one-half oak openings, nearly one-fourth natural meadows of first quality, and one township of heavy timber in detached bodies. Wood $2.50 to $3 per cord. Finely watered with over 20 large lakes, 3 rivers, and a number of creeks. Fish inexhaustible. There are 3 Norwegian churches, 3 Methodist, 2 Baptist, 1 Congregationalist, 1 Presbyterian, and 1 Episcopalian in the county. Building material, brick and lumber. 5 steam saw mills, 2 grist mills, 1 by water and 1 by wind.

Personal property, 1868, $497,099; horses, 2336; cattle, 9796; mules and asses, 27; sheep, 7883; hogs, 1909; carriages, 143; watches, 117; pianos, 8; merchandise, $14,865; money and credits, $18,757.

VILLAGES.—ALBERT LEA, the county seat, nestles beautifully upon two lakes, and wears in the centre of its bosom still another covering ten acres. Population, 300; annual business, $300,000; 12 stores, 1 hotel, 4 lawyers, 1 doctor, weekly paper, and Presbyterian church.

The Southern Minnesota Railroad passes through it, and four other roads have made it a point on their lines, viz., the Green Bay, Wabasha and Omaha, the St. Louis and St. Paul Air Line, the Minnesota and Northwestern from Mankato to the Cedar Valley Road, and the Iowa and Minnesota from Des Moines to Owatonna, which will make it a railroad centre. Lots sell at only $30 to $150 each. Its water-power is claimed to be among the best in the State.

FREEBORN AND GENEVA have each 100 population, 2 stores, business, $50,000; and Shellrock City 100 people, 1 store, business, $10,000; a clergyman in each, lawyer at Freeborn, and doctor at Geneva.

POST OFFICES.—Besides the above, Alden, Bancroft, Buckeye, Clark's Grove, Fremont, Gordonsville, Guilford, Hartland, Hayward, Moscow, Nunda, State Line, Sumner, Trenton.

FARIBAULT COUNTY.

Next west of Freeborn, same size, gently undulating prairie, timber sufficient for years, soil 2 to 5 feet deep, black, warm, sandy loam, clay subsoil, finely watered with rivers, 20 large lakes, and creeks; wild lands worth $3 to $6, improved, $8 to $20; timber, $15 to $60; fuel, $2.50 to $4 per cord; land assessed, 169,030 acres; value per acre, $3.06; school lands, 15,089; homestead not reported; cultivated, 1867, 19,117; wheat product, 1867, 141,750 bushels; 1868, area of cultivated land estimated double;

wheat product, 189,000 bushels; oats, 191,433; corn, 85,029; barley, 4269; potatoes, 42,507; wool, 10,636 lbs.; butter, 131,342; cheese, 5830.

STATISTICS.—Organized 1856; population, 1860, 1332; 1865, 4735; 1869, over 10,000; vote for Grant 1421, Seymour 373. Nationality, Americans predominating, with large settlements of Germans, Norwegians and Irish; school districts, 84; houses, 47; scholars, 2854, year's increase, 270; assessed property, 1860, $273,654; 1868, $928,480; personal property, $487,641. Horses, 2314; cattle, 7228; mules and asses, 22; sheep, 4456; hogs, 1772; carriages, 171; watches, 159; pianos, 2; merchandise, $24,375; money and credits, $26,942. 5 saw and 3 grist mills; Methodist, Presbyterian, Catholic, Baptist and Episcopal churches; building material, brick and lumber.

The Southern Minnesota Railroad is to pass through the county, via Winnebago City, another is projected from Mankato to the Iowa line, and another from Red Wing to Blue Earth City.

VILLAGES.—BLUE EARTH CITY, the county seat, has 20 stores, selling over $200,000; 3 lawyers, 1 doctor, 1 bank, 2 newspapers, 2 hotels, Presbyterian church, 3 flouring and 1 saw mill, 2 breweries, 5 saloons, 2 billiard rooms, 3 agricultural implements dealers, 2 livery stables, shops, &c. Price of lots, $20 to $300. Population, 500.

WINNEBAGO CITY, has a number of stores, selling $150,000; 2 hotels, 1 newspaper, 2 lawyers, 2 doctors, mills, shops, and 400 population.

MINNESOTA LAKE, a new town; population, 100; goods sold, $50,000.

POST OFFICES.—Banks, Barber, Bass Lake, Clayton, Eden, Elmore, Ewald, Grapeland, Long Lake, Pilot Grove, Prescott and Walnut.

GRANT COUNTY,

Lies west of Douglas—16 townships, 268,000 acres—nearly all open to settlement, gently rolling prairie, very rich, fine meadows; timber rather scarce, but fine groves about the lakes—53 on the map; 47 votes for Grant, 2 for Seymour; settlers mostly Swedes and Norwegians, some Americans; rapidly settling; well watered; Pacific Railroad through one township.

GOODHUE COUNTY.

On the Mississippi below St. Paul—area about 500,000 acres—one of the largest and richest counties; generally elevated, level prairie land, with abundant timber skirting the rivers and creeks. Soil a dark loam, with clay subsoil, in the valleys varying from a heavy alluvial to a light sandy loam, unusually favored with water-power; brick and potter's clay and limestone for building. Prices of lands range from $5 to $50 per acre, mostly from $15 to $35. Organized in 1854; population, 1860, 8977; 1865, 14,880; 1869, 23,000. Norwegians, about 5500; Swedes, 3000; Germans, 4500; Irish, 1500; balance Americans mostly, with English, Scotch, Canadians and others.

STATISTICS.—Lands assessed, 464,699 acres; value per acre, $5.11; school land, 2433; homestead, 7651; cultivated, 1867, 91,912; wheat produced, 1,017,854 bushels; assessed property, 1860, $1,995,129; 1868, $4,621,157; personal property, $1,661,916. Horses, 6342; cattle, 13,957; mules, 132; sheep, 8354; hogs, 5335; carriages, 257; watches, 460; pianos, 53; merchandise, $171,342; money and credits, $207,439; school districts, 124; houses, 106; value, $72,975; scholars, 6725, year's in-

crease 521. Vote for Grant, 2885; Seymour, 929. Saw mills 4, flouring mills 14.

VILLAGES.—RED WING, the county seat, surveyed in 1853, incorporated in 1858. Population, 1865, 2362; 1869, about 5000, one-fifth German, two-fifths American, one-sixth Swede, one-sixth Norwegian, one-sixteenth Irish. Vote November, 1868, 826; shipments of wheat 1868, 806,108 bushels, 20,914 bushels of barley, 256 fanning mills, 10,711 bushels potatoes. Houses built, cost $193,609: being churches, $8000; stores, shops, &c., $98,200; 63 dwellings, $62,760; additions, $17,374; stables, $7335. 14 general merchandise stores, 3 dry goods, 6 groceries, 2 hardware and iron, 2 shoe and leather, 3 clothing, 3 drug, 4 jewelry, 3 variety, 4 flour and feed, and 4 millinery stores, 3 harness shops, 4 shoemakers, 4 blacksmiths, 1 iron foundry and machine shop, 3 tailors, 2 coopers, 1 gunsmith, and 1 cigar maker, transact a very large mercantile business, the sales of agricultural implements alone being $190,000 per annum. With 3 saw mills, 6 breweries, 2 bakeries and candy makers, 3 furniture, 2 sash and blind, 2 fanning mill and 5 wagon factories, and 1 grist mill, its manufactures are quite extensive. There are 8 hotels, 25 saloons, 2 printing offices, 8 grain warehouses, 3 photographers, 2 billiard rooms, 11 clergymen, 8 doctors, 9 lawyers. The churches are Presbyterian, Methodist, German Methodist, Catholic, (English and German services,) German, Swedish and Norwegian Lutheran, Swedish National and Baptist. A rich country on both sides of the river is tributary to Red Wing. On the Wisconsin side an immense forest of timber unequaled in quality and quantity, with water-powers convenient to the steam ferry, afford excellent resources for manufacturing agricultural implements for Red Wing and its rich back country.

PINE ISLAND has 1000 population, mostly Americans; a good hotel, 4 stores, good churches, shops, &c., water-power and a good location for a grist mill.

CANNON FALLS has 700 population, mostly American and Swedes, one of the best water-powers in the State; 2 large flouring and 1 woolen mill, 3 churches, 3 stores, shops, &c., but no hotel. Within 2 miles of its centre are 17 mill sites, at falls varying from 10 to 18 feet, where the whole water of the Cannon River may be used for power.

ZUMBROTA has 400 population, a Baptist and Congregational church, 2 flouring mills, 4 or 5 stores, shops, &c.

FRONTENAC, 12 miles from Red Wing, 8 from Lake City, on the river has a large hotel fitted up for invalids, several stores, a grist mill, good scenery, hunting, fishing and boating accommodations for tourists.

FLORENCE is a smaller village in the same township. Population of the township 1000, 600 Germans, 400 Americans.

ROSCOE, WANAMINGO, FEATHERSTONE, and other points, are the nuclei of villages, and besides these there are—

POST OFFICES at Ayr, Belle Creek, Fair Point, Goodhue Centre, Hadar, Holden, Kenyon, Minneola, Norway, Roscoe Centre, Spencer, Spring Creek, Stanton, Wacouta and Wastedo.

HENNEPIN COUNTY.

Area 376,640 acres, of average fertility; sandy along the rivers from 1 to 5 miles back, back of this mostly a dark loam with clay subsoil; two-thirds timber, a part hilly and broken; 75 lakes, besides creeks and rivers; plenty of limestone, brick and lumber. Prices of land

about the average of Goodhue county. Population, 1860, 12,832; 1865, 17,076; 1869, over 30,000, half Americans and others, 2000 Norwegians, balance German and Irish equally divided.

STATISTICS.—Land assessed, 328,673; value per acre, $5.28; school land, 7687; cultivated, 1867, 30,231 acres; wheat product 231,088 bushels; assessed property, 1860, $3,557,522; 1868, $5,764,273; personal property, $1,598,061. Horses, 3941; cattle, 9090; mules, 69; sheep, 6906; hogs, 3684; carriages, 682; watches, 631; pianos, 169; merchandise, $272,918; money and credits, $117,961; school districts, 92; houses, 85; value, $148,905; scholars, 9417, year's increase 992. Vote for Grant 3128; Seymour, 1984; mills over 40; churches over 30.

CITIES.—MINNEAPOLIS, beautifully located on a level prairie, the second city in the State in population and business. The St. Anthony Falls water-power makes it the first as a manufacturing point. Population, 1865, 4607; 1869, by census, 13,080; its vote in November, 1868, being 2242. Improvements in 1868, one-half dwellings, $603,675; manufactures, $3,813,215; capital in manufacturing, $1,911,000; hands employed, 1652. Flouring mills, 9; run of stone, 38; daily capacity, in barrels, 2580; flour shipped, 161,432 brls.; cost of mills, $339,500; saw mills, 14; invested in mills, $356,000; value of lumber product, $1,165,077; iron works, 4 principal works and some smaller; money invested, $213,050; product, $236,197; woolen mills, 2; money invested, $140,000; product, $128,095; planing, door, sash and blind mills, 6; capital, $80,000; product, $121,000; paper mill, $60,000 capital; furniture factory, $35,000 capital; product, $69,000; oil mill, capital $20,000. There are also factories for plows, barrels, fanning mills, wooden ware, &c., &c.

There are 45 groceries, 17 dry goods stores, 8 drug, 4 hardware, 10 boot and shoe, 5 hat and cap, 4 clothing, 2 auction, 4 cigar, 3 agricultural implement, 33 saloons, 16 doctors, 30 lawyers, 6 merchant tailors, and other trades.

The growth of this city has been most rapid. Connected by railroads with all parts of the State, its unrivalled water-power, and the pluck and enterprise of its citizens ensure its future growth, in connection with St. Anthony, to a manufacturing city of metropolitan proportions.

Churches.—2 each of Baptist, Presbyterian, Congregational, and Lutheran, 1 Free Will Baptist, 1 Methodist costing $30,000, 1 Universalist costing $16,000, 1 Episcopalian, 1 Catholic, 1 society of "Friends," and 1 of "Adventists," and an organization of Swedenborgians.

Water-Power Improvement.—(See pages 137 and 140, Part First.)—$40,000 has been expended for a canal to make available the lots below the falls, $85,000 more is being expended to make a tunnel 3000 feet long on the St. Anthony side, $30,000 has been expended for aprons to prevent the wearing process of the water, and $100,000 more is appropriated by the city.

The dam on the St. Anthony side is 14 feet high and 1300 feet long; that on the other side 20 feet high, 60 wide at the base, and 1500 feet long.

The water-power is owned on both sides by companies who lease it to manufacturers.

ST. ANTHONY is connected by a wire suspension bridge and a railroad bridge with Minneapolis. Had 2499 population in 1865, and in 1869 about 5000. Its manufactures in 1868 were $1,205,817; capital invested, $652,050; 4 flour mills costing $85,500; value of product, $371,000; 9 saw mills, capital, $71,000; product, $410,-

517; iron works, capital, $123,800; product, $140,600; furniture factory, product, $69,000; paper, $60,000; pottery, $3000; soap, $30,000; beer, $30,000; sash, doors, planing, &c., $35,000; barrels, $37,000, &c., &c. Its mercantile business has been transferred to a considerable extent to Minneapolis. The State University is located here. There are 2 Methodist, 1 Congregational, 1 Presbyterian, 1 Episcopal and 1 Universalist churches. New houses and improvements, 1868, $142,250.

The manufacturing statistics above are from the official report of the Secretary of the Minnesota Board of Trade.

Falls, Lakes, and Cascades.—*St. Anthony Falls*, described 100 years ago by Carver as 30 feet high, appear now to be less than half this height, and are much more valuable for their unrivalled water-power than for their grandeur or beauty of scenery.

Minnehaha, 6 miles from Minneapolis by rail, has a fall of 60 feet, and is a gem.

Silver Cascade and the *Bridal Veil* are near St. Anthony, and worth a visit.

Lake Minnetonka, 15 miles by rail, is a resort for invalids and tourists, and is provided with hotels, fishing tackle, and sail boats. It has a small steamer also.

Lakes Calhoun, *Harriet*, and *Cedar*, close to Minneapolis, are much admired and popular resorts.

Dayton, Greenwood, Bloomington, Champlin, Excelsior, Wayzatta, and Osseo are embryo towns, with one or more stores and a few houses.

Post Offices.—Corcoran, Bloomington Ferry, Eden Prairie, Fort Snelling, Freeport, Hassan, Industriana, Leighton, Lenz, Maple Grove, Maple Plain, Minnetrista, Minnetonka, Plymouth, Richfield, St. Bonifacius, Tamarack.

HOUSTON COUNTY.

Sixteen townships or 368,000 acres; rolling, with meadow, timber and prairie equally distributed; soil black loam with clay subsoil; well watered by Root River and branch, and by 10 creeks, and ample water-power upon every brook; good building stone and brick; fuel, $2.50 to $3 per cord; wild land, $3 to $10—improved, higher; population 1860, 6667; 1865, 9788; 1869, 14,000. Vote for Grant, 1435; Seymour, 899. Nationality, one-third American, one-third Norwegian, one-sixth German, one-sixth Irish.

STATISTICS.—Land assessed, 319,085 acres; value per acre, $3.69; cultivated, 1867, 43,923. Wheat product, 426,867 bushels. School land, 8289; homestead, 560; railroad, considerable. Assessed property, 1860, $1,214,-022; 1868, $1,976,500. Personal property, $725,468. Horses, 3229; cattle, 8369; sheep, 6923; mules, 54; hogs, 6338; carriages, 138; watches, 125; pianos, 10; merchandise, $48,664; money and credits, $102,652. School districts, 74; houses, 67; value, $26,475; scholars, 4642; year's increase, 375. Grist mills, 11; saw mills, 5; churches, about 15; 5 Masonic, and 4 or 5 Good Templar lodges.

VILLAGES.—BROWNSVILLE, on the river, is the principal business town, having about 1200 inhabitants, 15 stores, 3 doctors, 3 ministers, 2 lawyers, a Methodist, Presbyterian, Lutheran and Catholic church, saw mill, &c.

CALEDONIA, the county seat, surrounded by the richest of lands, has 800 population, 12 stores, 3 doctors, 1 lawyer, 3 ministers, a Presbyterian, Episcopal, Methodist and Catholic church, saw mill, plow and wagon factories, &c.

HOUSTON, 18 miles out on the railroad, population 600,

has 6 or 8 stores, is a grain and lumber depot, in a rich country, and promises to compete with Brownsville.

Hokah, 5 miles out, population 500, noted for its extensive water-power, 4 or 5 stores, railroad machine shops, 1 lawyer, 1 doctor, 2 saw and grist mills, a Presbyterian church, &c.

La Crescent, a grain market, population 300 or 400, 3 stores, 2 lawyers, 2 Methodist and 1 Presbyterian church.

Post Offices at Sheldon, Winnebago Valley, Fitzen, Freeburgh, La Villa, Looneyville, Lorette, Money Creek, Riceford, San Jacinto, Spring Grove, Union, Wilmington, Yucatan.

ISANTI COUNTY.

Area 14 townships or 322,000 acres, heavily timbered with hard wood in the northern townships with a strong clay soil, the north-west townships nearly all pine timber, the middle and southern parts oak openings with a lighter sandy soil, 48 lakes, valuable meadows and tamarac swamps. The Rum River bottoms very rich, and in the eastern townships, fine meadows and timber on the Sunrise River. The whole county finely adapted for pasturage and stock growing. Land worth $3 to $5 per acre. Building material, lumber, brick and boulders. Fuel very cheap. Population, 1860, 178; 1865, 453; 1869, about 1200. Vote for Grant, 263, Seymour, 29. Nationality, mostly Americans and Swedes, some Germans and English.

Statistics.—Land assessed, 29,281 acres; value per acre, $2.08; school land, 17,880 acres; railroad lands, alternate sections within 10 miles of the road; government lands, 1868, 60,000 acres. Wheat cultivated, 1867,

477 acres; product, 5765 bushels; oats, 203 acres, 5483 bushels; corn, 327 acres, 4950 bushels, &c. Assessed property, 1860, $95,256; 1868, $112,219; personal property, $71,540. Horses, 140; cattle, 1271; sheep, 954; hogs, 159; carriages, 13; watches, 29; merchandise, $2300; money and credits, $2660. School districts, 13; scholars, 476; year's increase, 177; houses, 5; value, $450. Saw mill, 1; churches, 1 Baptist and 1 Lutheran, both Swede, in Cambridge, and Methodist worship in several parts of the county.

VILLAGES AND POST OFFICES.—OXFORD and CAMBRIDGE are the nominal villages. Isanti, North Branch and Spencer Brook, the post offices.

ITASCA COUNTY.—(SEE CASS.)

KANABEC COUNTY.

Fifteen townships—345,000 acres—chiefly valuable for pine, which is found in 10 townships. Soil generally second and third rate, and a large portion of the county tamarac swamps and marshes. Its abundant natural meadows and proximity to market will cause it to be drained and used for stock and dairy purposes, in the future. The surface is mostly undulating—a part level. It had 31 population in 1865. It reported 18 scholars for 1868, year's increase, 7. Cast 8 votes for Grant, and 1 for Seymour. Has 1 school house, worth $400. Lands assessed, 117,334 acres; value per acre, $1.66; had 63,985 acres of government land in 1868; land under cultivation, 147 acres; 6 in wheat, raised 100 bushels; 52 oats, 610 bushels; 46 corn, 1410; 20 potatoes, 3708; 23

beans, 210. Assessed property, 1860, $108,446; 1868, $201,254; personal, $5100. Horses 8, cattle 55, hogs 10.

BRUNSWICK is the only post office and settlement; has a hotel and a few houses. In the county are 20 lakes.

JACKSON COUNTY.

Area 20 townships or 460,000 acres—a rich prairie county, with about 3000 acres of timber, mostly on the Des Moines River—oak, maple, black walnut, basswood, cottonwood, &c. Plenty of meadow, well distributed; numerous beautiful lakes—18 on the map—one 10 miles long; surface gently undulating; land mostly free at government price, or held by railroad companies. Building material, lumber, brick and boulders. Excellent water-power. Fuel, $2.50 per cord. Population, 1860, 181; depopulated in 1862 by the Indian war; 1865, 234; 1869, 1500. Vote for Grant, 201; Seymour, 16. Nationality, principally Americans and Norwegians.

STATISTICS.—Land assessed, 5570 acres; value per acre, $3.01; school land, over 25,000 acres; railroad lands, nearly one-half the county; cultivated, 1867, 393 acres. Wheat product, 2445 bushels. Horses, 1868, 174; cattle, 1069; mules, 3; sheep, 368; hogs, 87; carriages, 6; watches, 28; merchandise, $1330; money and credits, $4305. Assessed property, 1861, $13,052; 1868, $55,975; personal property, $57,313. School districts, 12; houses, 3; value, $700; scholars, 344; year's increase, 93. 2 saw and grist mills; 2 churches.

VILLAGES.—JACKSON, the county seat and location for the land office, is the only village, and has 3 general stores, 1 hardware and tin store, 1 drug, 1 feed, and 1 furniture store, hotel, photograph gallery, wagon, shoe,

and blacksmith shops, 2 lawyers, 2 clergymen, a Methodist and Presbyterian church, 1 saw and 1 grist mill.

Post Offices at Jackson, Petersburg, and Summit.

KANDIYOHI COUNTY.

Twelve townships, 276,480 acres; a rich, level prairie county, with 40 lakes skirted with groves of oak, basswood, hickory, and butternut, averaging about 300 acres each; lakes generally connected by creeks, in the valleys of which are meadow lands. Elevation above the sea, 1100 feet. Building material: brick, boulders on the lake shores, and lumber. Price of land (a few thousand acres free,) $3 to $5 for prairie; $5 to $12 for timber. Population, 1866, 200; 1867, 400; 1868, 800; 1869, 1200; three-quarters Swedes. Vote for Grant, 160; for Seymour, 12.

Statistics.—Land assessed, 21,380; value per acre, $2.23. School land, one-eighteenth; railroad land, 100,000 acres; State University, 6000; State capital, 6400; cultivated, 1867, no report. Horses, 1868, 109; cattle, 584; sheep, 405; hogs, 56; carriages, 1; watches, 16; money, $729. Assessed property, 1866, $48,903; 1868, $62,087. School districts, 6; scholars, 213; year's increase, 56.

Villages and Post Offices.—Kandiyohi is the county seat. No villages have yet developed. The railroad is now being finished through the northern part of the county.

LAKE COUNTY.

Four thousand square miles, fronting 100 on Lake Superior. (See "Northern Minnesota," and "Scenery,"

Part First.) Population, 1860, 96; 1865, 154; 1869, over 300. School district, 1; scholars, 107; year's increase, 12. Lands assessed, 22,869 acres; value per acre, $1.26. Personal property, $2260. County seat, BEAVER BAY. Post offices at Grand Portage and Lake Lillian. Indian trading post and fishing station near Pigeon River. 35 or 40 lakes.

LINCOLN AND MONONGALIA COUNTIES.

Fine agricultural counties, similar to Kandiyohi. Lincoln is very sparsely settled, and has no statistics reported. It has a post office at Wahhahsahpah.

There are 80 lakes in Monongalia, and 19 in Lincoln.

MONONGALIA has a population of about 2500, a majority Swedes and Norwegians. Vote for Grant, 381; Seymour, 74. School census, 1868, 552; year's increase, 193; school districts, 29; houses, 10; value, $1750. Land assessed, 31,800; value per acre, $2.29. School land, one-eighteenth; railroad land, about 75,000 acres; cultivated, 1867, 1753 acres. Wheat product, 14,467 bushels. Personal property, $188,771. Horses, 408; cattle, 2090; mules, 4; sheep, 1452; hogs, 239; carriages, 31; watches, 70; pianos, 1; merchandise, $5575; money and credits, $8971.

VILLAGES.—NEW LONDON, the county seat, has 3 stores, a saw and grist mill, blacksmith shop, and 40 inhabitants.

POST OFFICES at Green Lake, Burbank, Georgeville, Land Lake, Harrison Irving, Norway Lake, and Roseville.

LE SUEUR COUNTY.

One of the "Big Woods" counties, which means black, deep, rich soil, and capitally adapted to agriculture. Area 14 townships. About 4 townships or over one-fourth of the county in the southern and eastern parts are prairie, with timber and water so arranged, that the farms seem to have been "made to order;" balance heavily timbered with oak, ash, elm, basswood, hickory, butternut, and some of the finest black walnut in the State. 60 splendid lakes. Limestone and brick for building. Excellent natural meadows. Water power on the Cannon and Le Sueur. Wild land $2.50 to $5 and $7 per acre; improved, $10 to $25. Population 1860, 5281; 1865, 7834; 1869, 13,000. Vote for Grant, 876; Seymour, 1095. Nationality nearly one-third American, nearly one-fourth German, over one-fourth Irish, 2000 Bohemians.

STATISTICS.—Land assessed, 255,970; value per acre, $3.60; school land, 4610; homestead, 320; railroad, several thousand. Assessed property, 1860, $498,194; 1868, $1,351,353; personal, $416,697. Horses, 1865; cattle, 6699; mules, 22; sheep, 4947; hogs, 5074; carriages, 207; watches, 118; pianos, 12; merchandise, $24,985; money and credits, $20,224. School districts, 77; houses, 67; value, $17,747; scholars, 4024; year's increase, 282; churches, 20.

VILLAGES.—LE SUEUR, the county seat, on the railroad and river, 64 miles from St. Paul, population about 1200, two-thirds American, one-fourth German, 100 Irish, has 5 general stores, 1 grocery, 2 hardware, 3 milliners, 1 drug, 1 book, 1 clothing, 4 hotels, 5 saloons, shops, &c., a Baptist, Catholic, Methodist and Episcopal church, Presbyterian and Christian congregations, several lawyers and doctors, and a weekly paper.

Ottawa, also on the railroad, is a pleasant, thriving little village of 3 stores, hotel, saw and grist mill, Episcopal church, shops, &c.

Cleveland is a live town of 2 stores, hotel, Catholic church, 2 saw mills, an ashery, stave manufactory, saloon, shops, &c.

Waterville is beautifully located between two large lakes, and is second only to Le Sueur in business and population. Has 3 stores, 2 hotels, 2 saw and 1 flouring mill, church, shops, &c.

Elysian, another beautiful place on Elysian Lake, has 2 stores, 2 hotels, 2 mills, saloon, shops, &c.

Kasota, on the railroad, has 2 grist mills, 2 saw mills, a store, hotel, saloon, shops, &c., and is near Lake Emily, a resort for tourists.

Cordova, on Lake Gorman, is a pleasant resort for tourists, has a hotel, saw and grist mills, store, saloon, &c.

Lexington has a hotel, saw and grist mill, store, shops, &c.

Oral is a post office in Lanesburg, the Bohemian township, which has nearly 2000 Bohemians, 2 Catholic churches, 2 stores, and 1 saw mill.

Post Offices.—Anawauk, Blue Grass Grove, Dresselville, Jefferson Lake, Kilkenny, Lake Washington, Marysburg, Montgomery, St. Hubertus, Union Centre.

MANOMIN COUNTY,

Originally a part of Ramsey, consists of one-third of a township, and Manomin is a railroad station with a hotel and a few houses. It polls 27 votes, 24 for Seymour.

MARTIN COUNTY,

(SEE DESCRIPTION OF SOUTHERN MINNESOTA.)

On the Iowa line, south west of and adjoining Blue Earth, has 20 townships or 460,800 acres of land, mainly gently undulating prairie, with timber along the lake chains and on Elm Creek—about 2500 acres; soil a dark sandy loam, 1½ to 2 feet deep, with clay subsoil, natural meadows of blue joint and pea vine, yielding 3 tons to the acre. Sixty-six large lakes and many smaller ones, besides numerous streams of living water. Fish by the wagon load. Brick and stone for building. Price of land, 70,000 to 75,000 acres free; wild, $3 to $5; improved, $10 to $15; timber, $50 to $75. Fuel, $3 to $4 per cord. Population, 1860, 151; 1865, 1430; 1868, 3500; 1869, 5000. Three-fourths Americans, with some Irish, German, English, French, Scotch and Norwegian. Vote for Grant, 520; Seymour, 101.

STATISTICS.—Land assessed, 27,060 acres; value per acre, $2.09; school land, 24,965; nearly 100,000 acres held by homestead and pre-emption claims; railroad land, many thousand acres. Cultivated, 1867, 4695; wheat produced, 20,554 bushels. Assessed property, 1860, $33,-452; 1868, $170,956; personal, $174,860. Horses, 620; cattle, 2554; mules, 10; sheep, 1290; hogs, 392; carriages, 15; watches, 46; pianos, 2; merchandise, $4730; money and credits, $4404. School districts, 42; houses, 18; value, $2690; scholars, 1012; year's increase, 100; 2 or 3 saw and 1 grist mill; 5 or 6 church societies.

VILLAGES.—FAIRMOUNT, the county seat, handsomely located on an elevation of 40 to 60 feet above one of the Centre Chain Lakes, and commanding a view of 10 to 20 miles extent, has 4 stores, 2 carpenters, 2 blacksmiths, 2

lawyers, 1 doctor, and a population of 100—also a weekly newspaper. Wanted, a hardware store, good hotel, wagon maker, and more mills in the county.

Post Offices.—Amber, Andrew Johnson, Belmont, Cedarville, Centre Creek, Chain Lake Centre, East Chain Lakes, Horicon, Lone Cedar, May, Nashville Centre, Pleasant Prairie, Rose Lake, Rutland, Waverly, Tenhassen, Walnut Grove.

McLEOD COUNTY.

West of Carver, 14 townships or 322,000 acres, moderately rolling, about one-third timber—balance prairie and meadow. Two north-east towns, Hale and Winsted, entirely in the Big Woods. East of a line drawn from the north-west corner of the county to the south-east corner in Helen township, about half timber and half prairie; and west of that, all prairie with groves of timber, undergrowth hazel, prickly ash, high-bush cranberry, &c. Soil rich and deep, with clay subsoil. Produces good winter wheat. Fifty large lakes, and numerous streams of living water: good water-power on Crow River. Excellent meadows: brick for building. Wild land, $3 to $10 per acre. Population, 1860, 1286; 1865, 2457; 1869, 5500. One-half Americans, balance Germans, Norwegians, French, Bohemians, and Irish. Vote for Grant, 605; Seymour, 381.

Statistics.—Land assessed, 166,182 acres, value $2.62 per acre. School land, 15,238; homestead, 67,249; cultivated, 1867, 2456; wheat, 46,060 bushels. Assessed property, 1860, $220,862; 1868, $684,578; personal, $233,519. Horses, 803; cattle, 4366; mules, 4; sheep, 3230; hogs, 1263; carriages, 80; watches, 50; pianos,

7 ; merchandise, $17,222 ; money and credits, &c., $6200. School districts, 46 ; houses, 22 ; value, $8660 ; scholars, 1540 ; year's increase, 471. 6 or 8 saw and 3 or 4 grist mills ; several churches.

VILLAGES.—GLENCOE, the county seat, 30 miles from Carver, 60 from St. Paul, on the line of the Hastings and Dakota Railroad. 400 population, 2 hotels, 4 general stores, a Methodist, Catholic and Congregational church, saw mill, hardware store, shoe store, 2 saloons, 2 lawyers, 1 doctor, shops and mechanics, and a weekly paper.

HUTCHINSON has about the same population, stores, shops, &c., with the addition of 1 doctor, 1 lawyer, 2 drug stores, a large flouring mill, Episcopal, Catholic and Methodist worship, but no church and no paper. Population, American, German, Bohemian and Norwegian.

POST OFFICES.—Bergen, Brush Prairie, Glendale, Keystone, E. Hutchinson, Koniska, Plato, Rocky Run, Silver Lake, Winsted Lake.

MEEKER COUNTY.

Second west of Hennepin and south of Stearns, 15 townships or 345,000 acres, 10 townships described by the government surveyors as soil first quality, four as "good," and one as variable, with part second and third rate. Surface mostly level or gently undulating, timber and prairie well distributed. About 100 large lakes, besides many smaller ones. Price of lands 4 to 15 dollars. Boulders around the lakes. Population, 1860, 930 ; 1865, 1229 ; 1869, over 5000 ; Americans, Swedes and Norwegians, Germans, Irish, &c. Vote for Grant, 600 ; Seymour, 285.

STATISTICS.—Land assessed, 109,528 acres ; value per

acre, $2.85; school land, 9221; railroad land, large amount. Cultivated, 1867, 3660; wheat product, 33,414 bushels. Assessed property, 1860, $197,767; 1868, $468,000; personal, $184,583. Horses, 757; cattle, 3207; mules, 17; sheep, 1620; hogs, 499; carriages, 57; watches, 87; pianos, 2; merchandise, $12,805; money and credits, $7903. School districts, 35; houses, 12; value, $2270; scholars, 1426; year's increase, 333.

VILLAGES.—FOREST CITY, the county seat, on Crow River, has 200 population, 4 general stores, 1 tin and hardware store, hotel, flour and saw mill, 1 doctor, 2 lawyers, shoe, tailor, carpenter, and blacksmith shops, 1 saloon, 1 Catholic church.

GREENLEAF has a hotel, saw and grist mill, 2 stores, a saloon, blacksmith shop, Presbyterian church, U. S. land office, and from 50 to 75 population.

KINGSTON has 3 stores, saw and grist mill, hotel, and 50 to 75 population.

MANNANNAH has a store, and there are two stores in Ripley township.

LITCHFIELD and DARWIN are embryo towns, just laid out, on the railroad passing through the north part of the county.

POST OFFICES.—Crow River, Koronis, Lake Harold, Swede Grove, Swift Lake, Sylvan Hill.

MILLE LAC COUNTY.

East of Benton and Morrison, 20 miles from the Mississippi River. About 17 townships, or 435,000 square acres. A belt across the south part, four miles wide, open and brush prairie, and oak openings; soil sandy on the open prairie and oak openings, fair quality; rich on the

brush prairie. A belt of hardwood timber north of this, five miles wide; oak, elm, ironwood, hickory, maple, ash, &c.; soil very rich. North of this, pine timber on the ridges, and poor lands; hardwood on the lower and bottom lands, with a very good soil; one-third pine, one-third hardwood, and one-third extensive and excellent hay meadows, with many tamarack and fir swamps, and cranberry marshes. The hay meadows in the two southern belts are among the first in the State. It is finely watered by Rum River passing out of Mille Lac through numerous small marshy rice lakes, thence southerly through the whole county, through fertile, well wooded bottom lands, fed by numerous tributaries. Mille Lac Lake is 25 miles across, clear, deep, full of fish; bold, rocky and beautiful shores. Brick, boulders, and lumber for building. Land $2.50 to $5 wild, $5 to $10 improved; in 1868, nearly 40,000 acres free government land; good water-power. Cuts 50 to 100,000,000 feet of pine lumber annually. Market in the pineries. Population, 1860, 71; 1865, 333; 1869, over 1000, mostly in two or three southern townships. Vote for Grant, 118, Seymour, 41. Nationality, two-thirds American, balance Germans, Irish, and others.

STATISTICS.—Land assessed, 181,208 acres; value per acre $1.29; school land, 1-18th; considerable railroad land; homestead, 1200; cultivated, 1867, no report. Assessed property, 1860, $196,755; 1868, $272,238; personal property, $35,452. Horses, 122; cattle, 629; mules, 4; sheep, 131; hogs, 73; carriages, 2; watches, 10; pianos, 2; merchandise, $2400; moneys, &c., $3700. School districts, 5; houses, 4; value, $4355; scholars, 264; year's increase, 56. Churches, 1 or 2; mills, 1 flour and 2 saw.

VILLAGES.—PRINCETON, the county seat and only town, has 400 population, nearly all Americans, and half from

Maine, 3 stores with over $40,000 annual sales, 2 large hotels, 2 steam saw mills and one flouring mill, 1 lawyer, no doctor, 2 preachers, 1 carriage shop, 4 blacksmith shops, 2 shoe and 2 carpenter shops. Princeton is the only post office.

MOWER COUNTY,

75 miles south of St. Paul, on the Iowa line, and 65 from the Mississippi River, 20 townships or 460,000 acres, about one-fifth timber and oak openings, four-fifths high, rolling, fertile prairies, abounding in springs and streams of living water, but no lakes; 4 townships without timber; brick and stone for building; crossed by two railroads built, and one projected. Wild lands, $3 to $10 per acre; improved, $10 to $25; timber, $15 to $75. Population, 1860, 3216; 1865, 5150; 1869, over 10,000; majority Americans, over 1500 Norwegians, over 600 Irish, over 400 Germans. Vote for Grant, 1239; Seymour, 469.

Statistics.—Land assessed, 384,631 acres; value per acre, $3.53; school land, 3016; cultivated, 1867, 24,247 acres; wheat, 181,494 bushels. Assessed property, 1860, $729,218; 1868, $19,349.26; personal property, $492,784. Horses, 2351; cattle, 6341; mules, 42; sheep, 2709; hogs, 1427; carriages, 220; watches, 165; pianos, 25; merchandise, $60,939; money and credits, $42,950. School districts, 72; houses, 60; value, $39,929; scholars, 2965; year's increase, 471. Church organizations over 30; buildings, 10 or 12; Methodist and Baptist most numerous; mills, 8 or 9 saw and grist.

Villages.—Austin, the county seat, at the junction of Cedar River, St. Paul and Milwaukee and Southern

Minnesota Railroads, and two or three others projected, has had its principal growth within three years. Population estimated at 2500, three-fourths Americans, balance Irish, Germans and Norwegians. It has 20 stores, besides shops, 2 breweries and 1 grist mill, business, $1,000,000 per annum; two banks, with $1,000,000 business, 5 hotels, 6 lawyers, 6 doctors, 10 saloons, 3 printing offices, 5 mill sites in the township, 2000 acres of heavy timber, and 5000 oak openings; a Methodist, Baptist, Catholic, Presbyterian, Congregational and Episcopal church, and Universalist organization, Masonic and Odd Fellows lodge; and lots worth $50 to $1500. The growth of Austin and its location indicate its promotion to the rank of a city in the census of 1870.

LEROY, 30 miles south-east of Austin, on the railroad, laid out in 1867, population, 275; 12 stores, business, $200,000; saw and grist mill, good water-power, 3 saloons, 1 lawyer, 1 doctor, a Methodist church, hotel, &c. Nationality, American, Irish and German.

LANSING, on the railroad, 6 miles north of Austin, has a weekly paper, 275 population, 3 stores, business, $50,000; a Methodist church, a doctor, &c.

ADAMS, 16 miles south-east of Austin, by rail, on Cedar River, has 5 warehouses, 4 stores, 3 saloons, a Norwegian church, about 15 houses and 75 population, Norwegian, American and Irish. Business, $75,000.

BROWNSDALE has 200 population, 2 stores; business, $30,000.

FRANKFORD, 150 population, 2 stores; business, $20,000; and a Methodist church.

POST OFFICES.—Canton, Colfax, Esba, Grand Meadow, Lyle, Madison, Mineral Springs, Mower City, Nevada, Prairie, Root River, Rose Creek, Waltham, Cedar City.

MORRISON COUNTY,

About 20 miles north of St. Cloud on both sides of the Mississippi, about 30 townships, or 690,000 acres. West side, soil best quality, timber predominating; splendid pine forests on the head waters of Two Rivers, Swan and Little Elk. East side poor and sandy along the Mississippi; balance good soil, prairie predominating, with timber enough for present use. Splendid meadows. First-class pine forests on head waters of Platte and west branch of Rum rivers. County finely watered: 34 large lakes. Extra water-power at Little Falls and Little Elk. Home market in the pinery. 200 miles of navigation north. Building stone at Little Falls. Land $2 to $5 per acre; most of it still free and vacant. Population, 1860, 588; 1865, 796; 1869, over 1200. 500 French, 400 Americans, 300 Germans and others. Vote for Grant, 68, Seymour, 139. "Can beat the world in fish: no end to game."

STATISTICS.—Land assessed, 221,941 acres; $2.19 per acre. School land, 1-18th; homestead, 9780; cultivated 1867, 868 acres; wheat, 3656 bushels. Assessed property, 1860, $433,436; 1868, $564,763; personal, $77,496. Horses, 274; cattle, 1178; sheep, 795; hogs, 2406; carriages, 12; watches, 33; pianos, 1; merchandise, $6160; money, &c., $8971. School districts, 11; houses, 8; value, $1175; scholars, 418; increase, 5. Churches, 5, Catholic and Methodist; mills, 4.

VILLAGES.—LITTLE FALLS, the county seat, has 3 stores, 2 mills, 1 Methodist church, lodge of Good Templars, no lawyer, no doctor, 2 clergymen. Store business, $100,000.

POST OFFICES.—Belle Prairie, Culdrum, Fort Ripley, Green Prairie, Pike Rapids, Swan River, Two Rivers.

MURRAY COUNTY.

(ALSO NOBLES, PIPESTONE, ROCK.)

See Part First, pages 36 and 37—also Jackson County, to which these are similar, with the exception that Rock is better supplied with building stone. There are 32 large lakes; and Nobles is to be crossed by the St. Paul and Sioux City and Southern Minnesota Railroad, and Rock by the latter.

These are all unorganized counties, with scarcely a settler, and the land rich and nearly all free, much not yet surveyed.

NICOLLET COUNTY,

On the Minnesota River, has nearly 13 townships, or about 297,000 acres; 15 lakes, covering 25 square miles; mainly prairie, mostly high rolling, with much meadow land in the western part; timber one to two miles wide, fringing the river, and groves bordering the lakes; soil deep and rich; building stone and brick on the river bluffs, east and south side of the county; water-power at the outlet of Swan Lake. Crossed by the Winona and St. Peter Railroad. Lands wild, $5 to $7 per acre. Population, 1860, 3770; 1865, 5019; 1869, 8500; one-third American, one-third German, balance Norwegians, Irish, Swedes, and others. Vote for Grant, 780; Seymour 485.

STATISTICS.—Land assessed, 141,101 acres; $4.00 per acre; school lands, 6171; homestead, 38,807; cultivated, 1867, 14,810 acres; wheat, 135,331 bushels. Assessed property, 1860, $738,852; 1868, $1,267,031; personal property, $515,889. Horses, 1885; cattle, 6440; mules, 15; sheep, 4213; hogs, 1353; carriages, 149; watches, 187; merchandise, $63,356; money and credits, $37,001.

School districts, 38; houses, 26; value, $7927; scholars, 2674; year's increase, 366. Churches, 11, 2 Catholic and 5 German, and Scandinavian Lutheran; mills, 3 saw and grist, and 1 windmill for grists.

VILLAGES.—ST. PETER.—St. Peter is the county seat, 72 miles from St. Paul by rail, and 134 by river; the location of a U. S. land office, and the State Lunatic Asylum; with a population of about 3000, has 30 stores, and 3 agricultural warehouses, selling $500,000 of goods, a large steam flouring mill, with a capacity of 100 bbls. per day, and several water mills near, a foundry and machine shop, a boot and shoe factory, with machinery to make 100 pair per day, manufactories of agricultural implements, fanning mills, and a steam cabinet factory; a Presbyterian, Methodist, Catholic, Episcopal, a German Lutheran, Swede Lutheran, and Norwegian Lutheran church, and lodges of Masons, Odd Fellows, and Templars. Besides the river, the St. Paul and Sioux City Railroad, and the Winona and St. Peter Railroad—a railroad from St. Cloud to St. Peter has four sections of State lands to the mile, and will finally be built—the whole combining to make St. Peter a central point of supply and trade with a rich back country.

POST OFFICES.—Fort Ridgely, Cortland, Granby, Hebron, Lafayette, Middle Lake, Nicollet, Norseland, Timber Lake, Redstone, Traverse des Sioux, and West Newton.

NOBLES COUNTY.—(SEE MURRAY.)

OLMSTED COUNTY,

Next west of Winona, and 15 or 20 miles from the Mississippi, has an area of 18½ townships, or about 422,000

acres, about two-fifths prairie, two-fifths brush and grub land, and one-fifth groves and forest timber, oak, black and white walnut, elm, bass, maple and black poplar. Soil a fertile black loam, with clay subsoil; surface level or gently rolling; land from $10 to $50 per acre; fuel at Rochester, $5 to $7; lumber, $20 to $25. Good building stone and brick in High Forest, Cascade, and Rochester. Good water-powers in Orion, Pleasant Grove, Quincy and Oronoco townships. Abundant natural meadows. Crossed by the Winona and St. Peter and two other projected railroads. Population, 1860, 9520; 1865, 15,076; 1869, 24,000. Americans, about 15,000; Irish, 3000; Germans, 1900; Norwegians, 2500; English, 500; Scotch, 300; Welsh, 200; balance Bohemians, Poles, Swiss and others. Vote for Grant, 2369; Seymour, 1308.

Statistics.—Land assessed, 403,726; value per acre, $5.30; school land, 1275; cultivated, 1867, 99,451 acres; wheat, 1,024,656 bushels; 1869, cultivated, 135,000 acres; wheat, 1,900,000 bushels (estimated.) Assessed property, 1860, $1,719,698; 1868, $4,300,108; personal property, $1,580,963. Horses, 6403; cattle, 12,346; mules, 156; sheep, 6447; hogs, 4397; carriages, 354; watches, 365; pianos, 49; merchandise, $211,591; money and credits, $182,025. School districts, 120; houses, 111; value, $94,900; scholars, 6813; year's increase, 436; mills and churches throughout the county.

Rochester, the county seat, had a population of 2666 in 1865; 4620 in September, 1868; estimated, 1869, over 5000. Building improvements, 1868, $202,150. Banks, 2; capital, $92,000; average deposits, $155,000; private capital in loans, discounts, &c., $400,000. Sales, 1867, from internal revenue assessors' books, agricultural machinery, $265,000; lumber, 4 yards, $150,000; hardware,

123,000; drugs, 55,000; groceries, $285,000; general merchandise, $821,000; of which one house sold $269,000; licensed dealers over 50, liquor dealers over 36. Hotels, 6. Churches, 8, costing $58,000; court house, $32,000; high school, $65,000. Methodist church, average attendance, 400; Congregational, 200; Presbyterian, 160; Episcopal, 125; Baptist, 125; Universalist, 100; German Methodist, 100; Catholic, no report. Mills, 3; costing $60,000; average capacity, 1800 bushels per day. Court calender, 1867, 111 causes. Letters sent from post office, 120,000. The business establishments and professions are about as follows: dry good stores, 15; groceries, 19; boots and shoes, 13; hardware, stoves, &c., 6; hats, 5; drug, 6; clothing, 11; agricultural implements, 6; doctors, 6; lawyers, 9; etc., etc. The water-power is good, and considerable manufacturing is done. Exports of wheat in September, October and November, 1867, 380,000 bushels.

Eyota, 13 miles east of Rochester, on the railroad, surrounded by a rich country, is an enterprising town of 500 population, and has 4 hotels, 13 general stores, 2 grocery, 1 hardware, 1 boot and shoe, 1 drug, 1 furniture store, warehouses, shops and lumber yards, a grain elevator, and shipped in September and October, 1867, 177,600 bushels of wheat.

Marion, 6 or 7 miles south-east of Rochester, in a rich and populous township, has a hotel, 2 stores, a church, a doctor, &c.

Byron, Oronoco, Pleasant Grove, High Forest, and Stewartville are thriving villages, with stores, hotels, mills and shops—some of them beautifully and romantically situated, with from 200 to 500 population.

Post Offices.—Dover Centre, Farm Hill, Haverhill, Little Valley, New Haven, Othello, Quincy, Rock Dell, Salem, Six Oaks, Viola.

OTTERTAIL COUNTY,

With 56 townships, or 1,288,000 square acres; 165 lakes; surface and soil, timber and prairie, like Douglas; one of Pope's "garden spot" counties; some parts marshy and poor land; a fine body of elegant pine timber in the northern part, sufficient for the Red River Valley for a long time, if economically used. Some of the finest water-powers, commencing at Dayton, and extending to near Ottertail Lake. This lake has an abundance of large white fish similar to those in Lake Superior. Population in 1868, about 800. Vote in November, 1868, 127; 105 Republican. Heavy immigration in 1869, and population estimated at over 2000; three-fourths Swede and Norwegian, and one-fourth American and German.

OTTERTAIL CITY, the county seat, is the only town, and has 20 or 30 buildings, with the usual accompaniments of trade, &c.

CLITHERAL is a post office.

PINE COUNTY,

On the St. Croix, has about 41 townships or about 945,000 acres, valuable chiefly for its large bodies of pine lumber. Dr. Norwood, in Owen's Report, says of the country between St. Louis River and Pokegama Lake, on Snake River, including this county and a part of Carlton: "After passing the high hills south of the great bend of the St. Louis River, the country is undulating, but not knobby, and occasional small prairies with numerous wet meadows and tamarac, spruce and cedar swamps, present themselves in every direction, until the head waters of Kettle River are reached. * * * It is covered with

a great depth of red marl, clays and drift, based upon red sandstone." This brings us to the Pine County line. The following includes Pine County also.

NATURAL MEADOWS.—"West of the Bois Brule, and south of the great bend of the St. Louis River, the valleys which are depressed but little below the general level of the country, are occupied in most localities by either swamps or natural meadows. Some of these meadows are very extensive, and bear a luxuriant growth of grass, often 5 or 6 feet in height. It is coarse, but sweet, and is said to make an excellent hay, being much used as provender for cattle in all the pineries and in the settled parts of the territory where it grows."

SOIL AND CAPACITY FOR DRAINAGE.—"The soil of these valleys is generally lacustrine. Many of them present every indication of having been uncovered or drained at a comparatively recent period, while some of them are evidently in proces of drainage at the present time, and so rapidly, that a large addition to the tillable land of the territory may be safely calculated upon at no very distant date. Should it become desirable to do so, the process of drainage might be easily accelerated by art, and at inconsiderable expense."

The Valley of Snake River from Pokegama Lake to the St. Croix, is a good country. On the east line of the county bordering the St. Croix, there is also some good farming land, but the chief value of the county is its pine timber. Population, about 250; vote for Grant, 35; Seymour, 5; assessed lands, 213,977 acres; value per acre, $1.51; assessed property, 1860, $425,725; 1868, $331,575; balance about like Kanabec.

VILLAGES.—Chengwatana is the county seat and only town. The Superior Railroad runs through it and will doubtless bring forth other villages in due time.

POPE COUNTY,

With 20 townships or 460,000 acres, organized August, 1866, has about 3000 population, about half Swedes and Norwegians, one-third Americans, and balance Irish, Scotch, &c. Vote for Grant, 311; Seymour, 62. One of Pope's "Garden Spot" counties, so much like Douglas and Ottertail, one description will answer: has 80 lakes, among them White Bear, 10 miles long, which "in the spring and fall literally swarms with ducks and geese, white swans and pelicans." Surface stone, and some limestone quarries. Brick, hard and basswood lumber at $16 to $20; fuel, $3. Good water-power on the Chippewa River, and near Glenwood, fine natural meadows in all parts of the county.

Statistics.—Land assessed, 97,838; value per acre, $2.05; school land, one-eighteenth; railroad land, about 56,960 acres; homestead, 54,960; government land plenty. Assessed property, 1867, $310,552; 1868, $305,442; personal, $135,965. Horses, 238; cattle, 1436; mules, 14; sheep, 737; hogs, 78; carriages, 10; watches, 53; pianos, 1; merchandise, $3238; money and credits, $6507; school districts, 19; houses, 4; value, 1390; scholars, 420; year's increase, 163. No churches or mills in the county. Religious services in school houses.

Glenwood, the county seat, is pleasantly located on White Bear Lake, has 4 stores, 2 hotels, a lawyer, carpenter and blacksmith, and about 20 houses. Wants a hardware and drug store, a doctor, a grist mill, cabinet maker and newspaper.

Post Offices.—Anderson, Gilchrist, Lake Johanna, Otto, Reno, Westfield.

POLK, PEMBINA AND PIPESTONE COUNTIES.

FOR POLK AND PEMBINA, SEE "RED RIVER VALLEY," "NORTH-WESTERN MINNESOTA," AND "CASS COUNTY." FOR PIPESTONE, SEE "WESTERN MINNESOTA," AND "MURRAY COUNTY."

RAMSEY COUNTY.

4½ townships, or about 104,000 acres; two townships of good farming land, balance sandy, broken, brushy oak openings, interspersed with level tracts of fair land; 20 large lakes; timber scarce; good building limestone; some fair water-power near St. Paul. Wild land, $3 to $5, $10, and $20; improved, near St. Paul, $50 to $100; fuel, $6 to $8 per cord; lumber, $16 to $45. Population, 1860, 11,962; 1865, 15,107; 1869, estimated, 24,000; Americans, 8000; Germans, 5500; Irish, 5000; French, 1500; Norwegians and Swedes, 1500; English, 800; Bohemians, 400; others, 1300. Vote for Grant, 1669; Seymour, 1928.

STATISTICS.—Land assessed, 86,128; value per acre, $7.22; school land, 3276; cultivated, 1867, 6727; wheat produced, 38,420 bushels. Assessed property, 1860, $5,827,599; 1865, $6,308,058; 1868, $9,265,949; personal property, $3,183,607.* Horses, 1460; cattle, 1830; mules, 65; sheep, 608; hogs, 916; carriages, 443; watches, 631; pianos, 236; merchandise, $932,270; money and

* The property, as returned, counting the gross receipts of insurance companies the same as in 1867, was: St. Paul, $3,210,220; Reserve Township, $28,518; McLean, $53,208; White Bear, $12,693; New Canada, $34,736; Rose, $24,050; Moundsview, $1376. An abatement of bank stock from 90 to 50 cents by the State Board of Equalization caused a reduction of several hundred thousand dollars in the assessed value of the county.

credits, $183,103. School districts, 20; houses, 20; value, $54,135; scholars, 5851; year's increase, 440.

Cities and Towns.—St. Paul, the county seat and State capital, handsomely located on a plateau, 114 feet above the river, with a terrace of bluffs in the rear; had a population in 1849 of 400; 1850, 840; 1855, about 5000; 1857, 10,000; 1860, 10,600; 1865, 12,976; 1869, estimated by directory census at about 20,000—names reported being about 5600. Nationality about in the ratio given for the county.

Growth in Wealth.—*Personal Property.*—Assessed, 1855, $513,220; 1856, $549,315; 1857, $1,197,400; 1858, $579,609; 1859, $815,217; 1862, $713,761; 1863, $853,-689; 1864, $1,520,562; 1865, $2,639,522; 1866, $2,909,-437; 1867, $3,148,163; 1868, $3,210,220.

Real Estate.—Assessed, 1855, $1,867,247; 1856, $3,277,450; 1857, $6,437,235; 1858, $3,464,700; 1859, $4,955,984; 1862, $2,141,285; 1864, $2,849,616; 1866, $4,484,414; 1868, $5,977,387.

Incomes. — 1864–5, $851,805; 1865–6, $886,505; 1866–7, $920,569; 1867–8, $924,343; 1868–9, $1,003,-372.

Building Improvements reported for 1867, $712,860; 1868, $1,005,050—total buildings, 361, of which 48 were business blocks and stores, 276 dwellings, 3 churches, 4 hotels, &c. For 1869 there is more building than ever before—one hotel alone costing by estimate $150,000.

Banking Business.—Three national banks, with a capital of 900,000, sell $12,695,167 exchange per annum. Four private banks sell $3,942,396. Total exchange sold per annum, $16,637,563. One private bank, with a capital of $100,000, just commenced, not counted.

Daily cash receipts and disbursements of all the banks, $413,470.34. Average deposits for national banks for

quarter ending October 1st, 1869, $987,436; four private banks, for August, 1869, $430,485. Total deposits, $1,417,921, as officially reported to U. S. Assessor.

Mercantile Business.—The mercantile business of St. Paul extends from Central and Southern Minnesota, and the north half of Wisconsin, to Fort Garry, 600 miles north-west, and was reported in 1868 by the Secretary of the Chamber of Commerce as amounting to $15,000,000. Two wholesale houses are reported to have each a capital of $150,000. There are over 100 dry goods and grocery houses, besides wholesale jobbers of hardware, stoves, drugs, clothing, agricultural implements, &c., &c.

Manufactures.—167 manufacturers, who pay special tax to the United States for year ending May, 1869, report value of their products $683,310. Manufacturers of beer, ale, spirits, tobacco, cigars and snuff, not included with the above, $343,181.

Five flouring mills, with a daily capacity of 200 barrels, estimated by millers, $450,000.

Two iron foundries (estimated,) $190,000; two saw mills (estimated,) $125,000; 4 vinegar manufactories, $18,000; two pork packers, $10,000; gas, $36,000; cut stone, 1868, $50,000; 5 planing mills and manufactories of doors, sashes, &c. (estimated,) $150,000; bread and crackers (estimated,) $65,000. Total manufactures, $2,120,490. Adding, for imperfect returns to assessors, under estimates, and sundry small dealers, $250,000, will make the manufactures of St. Paul nearly *two and a half millions of dollars.*

Railroad and River Business.—(See Part First, pages 135–6.) River men estimate that 48,000 tons of freight are brought to St. Paul by steamboat. Passengers carried on St. Paul and Pacific Railroad first 8 months of 1868, 74,478; same period, 1869, 94,246—averaging in

the summer 600 passengers daily. Freight carried, 1867, 36,489 tons; 1868, 62,099; 1869, large increase, not figured. Freight carried on St. Paul and Sioux City road, 1867, 30,259 tons; 1868, first 9 months, 35,294; 12 months ending October 1st, 1869, 86,516.* Passenger earnings same periods, $71,552.47; $73,357.31; $126,-968.52.

The St. Paul and Superior and the St. Paul and Milwaukee are now running into the city, but we have no statistics of their business. Having 5 railroads with from 2 to 6 daily trains, and 2 or 3 daily steamers, carrying passengers and freight, some idea may be formed of the railroad and river business of the city from the above meagre reports of the St. Paul and Pacific running northward into the least populous portions of the State, and the St. Paul and Sioux City.

Railroads.—The St. Paul and Pacific, with a line to Pembina and another to Breckinridge; the St. Paul and Superior; St. Paul and Sioux City, connecting near Shakopee with the Hastings and Red River Railroad; St. Paul and Milwaukee; St. Paul and Chicago; the Tomah and St. Croix, via Hudson to St. Paul; the St. Croix and Superior, via Hudson, with branch to Bayfield; and the St. Paul and Stillwater,—are the 11 railroads converging at St. Paul, 10 of them land grant roads, and rapidly building. (See "Railroads," Part First.)

Libraries.—Besides the State and the Historical Society libraries, the St. Paul Library Association has a library open daily to the public, with 3725 books on hand in January, 1869. It had 7 public lectures in the winter

* The freight for last twelve months consisted of wheat 904,158 bushels; flour, 53,292 bbls.; general merchandise, 84,153,100 lbs.; lumber, 7,990,865 feet, estimated at 3 lbs. per foot. For further business of the road, see page 136.

of 1868, by Anna Dickinson, Prof. Yeomans, Wendell Philips, J. S. C. Abbott, Mons. Du Chaillu, and Dr. Hayes, costing $1281, and netting $705 profits.

Churches.—There are 4 Catholic churches, 3 Episcopalian, 5 or 6 Methodists (foreign and native,) 3 Presbyterian, 1 German Lutheran, 1 Baptist, 1 Congregational, and 1 Universalist.

Miscellaneous.—There are 45 practicing and 25 non-practicing lawyers, 34 physicians, over 150 saloons, 3 first-class hotels, a United States Custom House of granite and iron, in process of erection, to cost about $300,000, lodges of Masons, Odd Fellows and Good Templars, 2 orphan asylums, each giving an annual fair, with a net profit of over $3000, an Opera House costing over $35,000, and sustaining theatricals a part of the year, a musical society and 2 bands of music, a Young Men's Christian Association, with daily prayer meetings and rooms open day and night, a Home for the Friendless, and various other benevolent associations for men and women, 3 daily and weekly papers, 4 weeklies and 1 monthly. The city is lit with gas, and supplied with water by water-works.

The Future of the City.—As her citizens differ on the question whether her population in 10 years will be 50,000 or 100,000, we will let the outside world speak of her future.

Carleton, correspondent of the *Boston Journal*, in July, 1869, said:

"To ride through the streets of St. Paul, to behold its spacious warehouses, its elegant edifices, stores piled with the goods of all lands, the products of all climes, furs from Hudson Bay, oranges from Messina, teas from China, coffee from Brazil, silks from Paris; all the products of industry from our own land; to behold the streets alive with people, crowded with farmers' wagons laden with wheat and flour, to read the signs "Young Men's Christian Association," "St. Paul Library Association," to see elegant school edifices and churches, beautiful private residences, surrounded by lawns and adorned with works of art. * * * sends an indescribable thrill through our veins. * * * This section of Minnesota is far enough removed from Chicago, and the country is so fertile, so vast, so boundless in its resources, that a great commercial centre must exist somewhere in this region. The merchants of this city are determined to secure the prize if possible."

The *Winona Republican* of August 22, 1869, said of St. Paul:

"The city is steadily marching on to stable and certain prosperity. Evidences of this prosperity are witnessed in the numerous handsome and substantial business blocks and elegant private dwellings now in process of erection—many of them at a cost fully attesting the faith which the property holders of St. Paul have in the future of that city."

"But it is not alone in the magnitude of her building operations that St. Paul gives evidence of growth and solidity. The wide and all-embracing sweep of her railroad connections, present and prospective, constitutes a foundation for future greatness to rest upon, which no temporary adversity, or even possible rivalry, can subvert. Her iron arms are stretching out, almost literally, to every point of the compass. On one hand she is being linked to the vast inland Sea of Superior—on the other she is grasping the illimitable empire of the Far Northwest—a region of boundless savannas, of fertile vales, of hills in which lie embedded the precious metals, &c., &c. * * * The order given, the other day, over the Ocean Cable, by the European capitalists who own the main line of the St. Paul and Pacific Railroad, to complete that road to the Red River of the North, a distance of 225 miles from St. Paul, before the close of the present year, is an event the full force and importance of which can scarcely be grasped at a single effort. It is a stroke of financial daring which, but a half dozen years ago, would have startled the people of the whole country."

LITTLE CANADA, or New Canada, 7 miles from St. Paul, is the only village in the county; has a hotel, 5 or 6 houses, post office, and is an old settlement, principally of Canada French.

LAKE COMO, 2 miles from St. Paul, has 2 or 3 hotels and sail boats, for the accommodation of fishing parties.

WHITE BEAR LAKE, 10 miles by rail from St. Paul, has 2 or 3 hotels, with sail boats, &c., for fishing parties—also an Episcopal church and post office.

POST OFFICE BUSINESS.—In 1852 the cash receipts for stamps, postage, money orders, &c., per quarter was about $150; 1869, from $30,000 to $40,000. Letters received for St. Paul over 22,000 per week.

REDWOOD COUNTY,

Embracing a large part of Southwestern Minnesota, described on pages 35–6–7, Part First, has territory enough to make six counties, covering 110 townships. It is a new county, nearly all open to settlers, and its growth has been mainly within 3 years. Population, 1865, 95;

1869, about 2500 or 3000. 1868, vote for Grant, 138; Seymour, 8. Principally Americans, Norwegians and Swedes. It has 60 lakes, and the resources of a rich county.

STATISTICS.—Land assessed, 1868, 103,493 acres; value per acre, $2.24; school land, one-eighteenth; homesteads numerous; under cultivation, 1867, 268 acres. Assessed property, 1865, $12,153; 1868, $277,503; personal, $42,-870. Horses 120; cattle, 431; mules, 32; sheep, 282; hogs, 76; carriages, 6; watches, 34; merchandise, $3425; money and credits, $3281. Schools, 3; house, 1; value, $10; scholars, 154; year's increase, 34.

REDWOOD FALLS is the county seat and principal town, with 300 population. Near the place a mineral paint is being manufactured, and veins of coal discovered, which promise a good quality of coal.

YELLOW MEDICINE has a post office, and is the nucleus for another village.

RENVILLE COUNTY,

With about 23 townships, lies about 60 miles along the Minnesota River opposite Redwood County, and is a fine agricultural county and but little settled as yet. (See Chippewa County.)

RICE COUNTY,

South of Scott and Dakota, and west of Goodhue, has 18 townships, or about 415,000 acres; about two-thirds timber, balance prairie gently undulating; all north and west of Cannon River, more or less covered with timber

of the "Big Woods" variety—oak, maple, basswood, butternut, walnut, poplar, elm, and almost every variety growing in the Northern and Western States. A belt along Straight River, three or four miles wide, soil very deep and rich in the timber; and a rich black sandy loam 10 to 20 inches deep on a clay subsoil in the prairie. Natural meadows in timber and prairie. 20 large lakes. Brick all over the county, and limestone at Faribault. Water-power on Cannon and Straight rivers. Price of wild land, $2 to $15, improved, $10 to $35; some government land; crossed by St. Paul and Milwaukee Railroad. Population, October, 1853, about 100; 1860, 7549; 1865, 10,977; 1869, about 19,000; one-half Americans, one-sixth Germans, one-ninth Irish, 1000 Norwegians, 500 Bohemians, 500 French, balance others. Vote for Grant, 1785; Seymour, 1266.

STATISTICS.—Land assessed, 287,925 acres; value per acre, $5.22. School land, 3162; homestead, 3305; cultivated, 1867, 37,726 acres. Wheat, 286,438 bushels. Assessed property, 1860, $1,364,071; 1868, $3,130,184; personal, $1,078,794. Horses, 3572; cattle, 8646; mules, 74; sheep, 7588; hogs, 3875; carriages, 410; watches, 330; pianos, 46; merchandise, $163,898; money and credits, $155,858. School districts, 95; houses, 84 value, $74,499; scholars, 5448; increase, 414; flouring mills, 10 or 12; saw mills, 2 or 3; churches, 15 to 18.

CITIES AND VILLAGES.—FARIBAULT, the county seat, population 4000, at the junction of Cannon and Straight rivers, on the railroad, with a fine water-power, has an Episcopal College, High School for young ladies, a Theological Seminary, Deaf and Dumb Asylum, 2 Congregational churches, a Catholic, Baptist, Methodist, and Episcopal church, an Episcopal Cathedral now building, designed to be among the finest west of Chicago, 5 flour-

ing mills, 2 saw mills, 3 breweries, 1 tannery, 4 wagon and carriage, and 1 agricultural implement, plow, door, sash, blind, and melodeon factory, 60 different business houses, 2 banks, 15 hotels, 9 lawyers, 7 doctors, a carding mill, shops, &c. Building improvements, 1866, $181,000; 1867, $184,000; 1868, estimated, $200,000. Its exports in 1867 were, by rail, 7,500,000 lbs., and 7751 passenger tickets sold for $20,020. Average law business for several years, 18 new suits per annum. There is a weekly paper here.

NORTHFIELD, 14 miles from Faribault, and 38 from St. Paul, on the railroad and Cannon River, has 2900 population, mostly from New England, with 200 or 300 Swedes and Norwegians, and as many Germans and Irish. It has 33 business houses. Mercantile business, 1868, $406,000; manufactures, besides flour from 2 mills, $180,000; building improvements, $102,000; estimated for 1869, $244,000. First-class water-power, a flour mill shipping 18,000 barrels per annum, and another costing $30,000, with a capacity for 80,000 barrels per annum. Five churches, and a Congregational college just erecting a fine building. A bank with $25,000 capital, and another organizing with $50,000 capital. The town has 15 clergymen, 6 lawyers, 5 doctors, a weekly paper, claims to ship and receive more freight than any town in the county, and in 1868, that the railroad received at Northfield 40,000 bushels more of wheat than at any other town on its line, except Minneapolis—flour being reduced to a wheat basis.

DUNDAS, on the railroad and river, 11 miles from Faribault, has 500 population, mostly Americans and Canadians, a fine water-power, large flouring mill, saw mill, furniture factory, 4 stores, a Presbyterian and Episcopal church, hotel, shops, &c. The town is growing.

MORRISTOWN is also a growing village, ranking next to DUNDAS. WARSAW, CANNON CITY, SHIELDSVILLE, and WALCOT, are also small places, with stores, shops, mills, &c.

POST OFFICES.—Fowlersville, Hazelwood, Millersburg, Union Lakes, Wheatland, Wheeling.

ROCK COUNTY.

See "Western Minnesota," page 36, Part First, and Murray County. It has a few settlers and post office at Laverne.

SCOTT COUNTY,

West of Dakota, on the Minnesota River, has about 10 townships, or 230,000 acres; one-third prairie, balance timber of the Big Woods variety; brush, meadow, and marsh. A good deal of the land is rough, but a large proportion tillable; soil rich black sandy loam, especially in the woods; 30 large lakes, Credit Lake being over six miles long, and a resort for pleasure parties for boating and fishing; water-power at Jordan and Hamilton; best limestone for lime and building purposes. Land $5 to $30 per acre. Population, 1860, 4595; 1865, 8621; 1869, over 12,000; three-eighths Irish, one-half Germans and Norwegians, Germans leading all others, one-eighth Americans. Vote for Grant, 479; Seymour, 1455.

STATISTICS.—Land assessed, 200,766 acres; value per acre, $4.08; school land, 4179 acres; cultivated, 1867, 17,980 acres; wheat, 195,268 bushels. Assessed property, 1860, $682,502.49; 1868, $1,395,070; personal property, $484,134. Horses, 1777; cattle, 6752; mules, 81; sheep,

4293; hogs, 3705; carriages, 66; watches, 85; pianos, 15; merchandise, $78,251; money and credits, $12,029. School districts, 64; houses, 42; value, $17,940; scholars, 4119; year's increase, 266.

VILLAGES.—SHAKOPEE, the county seat, 32 miles from St. Paul by rail; population 1600, 6 hotels, 7 dry goods, 4 grocery, 2 hardware, 2 drug, and 2 confectionery stores, besides shops, 5 lawyers, 3 doctors, 6 clergymen, 2 Catholic churches, a Methodist, Baptist, Episcopalian, Presbyterian church, a lime kiln that ships lime to all parts of the State, and 2 weekly papers. There is a railroad machine shop for repairing and building cars.

BELLE PLAINE, 47 miles by rail from St. Paul, has 1000 population, 9 stores, 3 hotels, 2 saw mills, cabinet and carriage shops, &c.; Presbyterian, German Catholic, and Episcopal churches; 3 lawyers, 2 doctors, 2 clergymen, a wheat elevator, a salt spring, which a company has been formed to work. Good roads have recently been opened to all parts of the country, resulting in largely increasing the trade of the town.

JORDAN has about 1000 population, 3 hotels, the best water-power in the county—25 feet fall, three large grist and flouring mills, 1 doctor.

HAMILTON, 20 miles by rail from St. Paul, has about 100 population, 2 stores, a large flouring mill, good water-power, Catholic church, wants a hotel and a number of mechanics. A fine drive of five miles back leads to the finest and largest fishing lake, where 15 pound pickerel, and the finest bass, pleasant boating and picturesque surroundings offer attractions to tourists, invalids, and gentlemen of leisure.

POST OFFICES.—Blakely, Cedar Lake, Dooleyville, Helena, Lydia, Maple Glen, Margetown, New Dublin, Raven Stream, St. Lawrence, Sand Creek.

SHERBURNE COUNTY,

Lying along the east side of the Mississippi, north-west of Anoka, has about 13 townships or 300,000 square acres, half level prairie ; sandy like Anoka, but of medium quality ; groves of timber around lakes and on streams from 100 to 300 acres in extent ; a body of timber 5000 or 6000 acres north-west of Elk Lake ; 23 lakes ; rich land in town 34, range 26 ; fine meadow land anywhere north of Elk River adapted to stock raising ; parts of township 33, range 26–7 more or less knolls, marshes, lagoons, and ponds ; the northern part of county especially, filled with lakes, brooks, marshes abounding in meadows and spots of sandy prairie and clayey brush land. Good water-power. Water and waste land in county, 12 per cent ; tamarack swamp, 6 per cent ; best land back from the river. Prices, $2 to $8 for wild ; $5 to $40 improved. Population, 1860, 719 ; 1865, 819 ; 1869, about 2000 ; three-fourths American, balance principally from Sweden and British America. Vote for Grant, 205 ; Seymour, 148.

Statistics.—Land assessed, 146,528 acres ; value per acre, $2.41. School land, 13,352 ; homestead, 9996 ; railroad, large area ; cultivated 1649. Assessed property, 1860, $295,513 ; 1865, $376,714 ; 1868, $502,305 ; personal, $130,794. Horses, 400 ; cattle, 1661 ; mules, 11 ; sheep, 1250 ; hogs, 280 ; carriages, 44 ; watches, 59 ; pianos, 3 ; merchandise, $5950 ; money and credits, $8625 ; schools, 18 ; houses, 13 ; value, $3975 ; scholars, 617 ; year's increase, 80.

Villages.—Elk River and Orono 1 mile apart—both known as Elk River, 40 miles from St. Paul, by rail. County seat at Orono ; 80 houses, first-class water-power and flouring mill, sash, door, furniture and carriage

factories, all kinds of machinery for manufacturing wood, a saw mill, tannery, hotel, 2 stores and shops, and an Episcopal church.

Elk River has 40 houses, 2 hotels, 2 stores, steam saw mill and shops, and is a growing place.

Big Lake is a station and small village 50 miles from St. Paul by rail, has an elevator, some good buildings, several stores, and is a resort for sportsmen, the fishing being first-class.

Post Offices.—Brantford, Clear Lake, Lake Tremont, Livonia, Orlando, Pleasant Valley.

SIBLEY COUNTY,

Lying between Nicollet and McLeod, with its east line on the Minnesota River, has nearly 17 townships or about 380,000 acres, two-thirds rolling prairie and rich; one-third "Big Woods" occupying the four eastern townships and Green Isle, and a portion of New Auburn, Kelso, and Arlington. The river bottoms from one-half to two miles wide on the river overflow in high water, but produce immense quantities of hay. There are 37 large lakes; brick for building; plenty of fine meadows; well watered; population, 1860, 3608; 1865, 4786; 1869, about 7000. Vote for Grant, 382; Seymour, 706.

Statistics.—Land assessed 177,918 acres; value per acre, $3.51; under cultivation, 1867, 14,440 acres; wheat raised, 153,885 bushels; homestead land, 37,240 acres; school land, 13,403 acres. Assessed property, 1860, $346,167; 1865, $574,992; 1868, $842,085; personal, $256,652. Horses, 1357; cattle, 6371; mules, 14; sheep, 3146; hogs, 2443; carriages, 93; watches, 49; pianos, 2; merchandise, $15,383; money and credits, $16,038.

School districts, 49 ; houses, 37 ; value $13,008 ; scholars, 2592 ; year's increase, 374. 7 or 8 mills ; 10 or 12 churches—5 Catholic.

VILLAGES.—HENDERSON, the county seat, on the river, between Belle Plaine and Le Sueur, and half a mile from the railroad, has about 800 inhabitants, majority Germans, with French, Irish, Americans, and Norwegians ; 8 dry good and grocery stores, 3 hardware, and 1 drug, 4 hotels, 1 saw and 2 grist mills, 1 brewery, a Catholic, German Reform, and Methodist church, 2 lawyers, 3 doctors, mechanical shops, 2 terms of court per year—5 to 10 new cases at each.

FAXON, 8 miles below, is not a good location, but a good point for business, having 2 stores, 4 groceries, and a saw mill.

NEW AUBURN, beautifully located on a lake, has 2 stores, 2 hotels, saw mills and shops, and will eventually be a good point for business, having a fine country around it—settled mostly by Americans.

ARLINGTON, 12 miles above Henderson, has a store and hotel.

POST OFFICES.—Dryden, Green Isle, Kelso, Rush River, and Sibley.

STEELE COUNTY,

South of Rice and west of Dodge, on the line of the St. Paul and Milwaukee Railroad, has 12 townships or 276,000 acres ; timber, prairie, meadow, and water conveniently distributed, as to make it a county of "ready made" farms ; 8 large lakes ; surface high, rolling prairie ; its southern part the highest land—the "Watershed"—of Southern Minnesota, from which the water

radiates in all directions; a belt of timber 1½ to 3 miles wide on east side of the Owatonna River, bisecting the county from north to south; soil a deep, rich, black loam, resting on clay subsoil; brick and limestone for building. Population, 1860, 2862; 1865, 4932; 1869, about 10,000. Vote for Grant, 1137; Seymour, 503. Nationality, one-eighth German, one-sixteenth each of Irish, Bohemian and Norwegian, balance Americans.

Statistics.—Land assessed, 192,936 acres; value per acre, $4.85; homestead, 9620 acres; school land, 3649; under cultivation, 1867, 26,432; wheat product, 148,675 bushels. Assesssd property, 1860, $438,575; 1865, $886,-445; 1868, $1,745,356; personal, $598,204. Horses, 2006; cattle, 5625; mules, 35; sheep, 2858; hogs, 1311; carriages, 121; watches, 279; pianos, 24; merchandise, $84,811; money and credits, $83,949. School districts, 64; houses, 46; value, $37,920; scholars, 2749; year's increase, 232.

Cities and Towns.—Owatonna, 75 miles from St. Paul, the county seat, and point of junction for two railroads, besides the State Line and Owatonna road, not yet finished, located on Owatonna River, is a growing city of over 3000 people, two-thirds American, balance German, Irish, and some Norwegians, and does a large mercantile and manufacturing business. There is an agricultural implement manufactory and foundry doing $200,000 worth of business, besides 6 dealers in such implements, 3 plow manufactories selling over 400 breaking plows in the spring of 1868, 2 manufactories of furniture, 1 sash and blind, 1 of marble, 3 grist and 1 flouring mill, 2 breweries, 2 brick yards, 5 lumber yards, 1 pottery, shops of various kinds, 10 dry good stores, 12 grocery, 6 boot and shoe, 4 hardware, 3 drug, 2 book, 3 jewelry, 5 millinery, 6 clothing, 9 hotels, 4 eating houses, 9 saloons, 5 churches,

a $20,000 school house, 3 lawyers, 7 doctors, 1 dentist, &c. Building improvements in 1868 cost $170,000, including Congregational church, $10,000 ; 2 flouring mills, $25,000 ; 80 dwellings, $70,000 ; 8 business houses, $40,000, &c.

MEDFORD, 6 miles north of Owatonna by rail, has 250 inhabitants, 4 stores and 2 churches.

BLOOMING PRAIRIE AND CLINTON FALLS are small settlements, and there are

POST OFFICES at Aurora, Berlin, Cooleysville, Deerfield, Dodge City, East Meriden, Elwood, Meriden, Morton, River Point and Steele Centre.

STEARNS COUNTY,

On the Mississippi River, north-west of St. Paul 70 miles, with about 40 townships or 920,000 acres ; about one-third prairie, balance timber mostly, and meadows conveniently distributed in every township, gently rolling ; 120 large lakes, besides streams of living water ; soil rich and productive ; very little waste land ; good water-power near Clearwater, Cold Spring, Paynesville, Sauk Centre, and St. Cloud ; at Sauk Rapids and Watab River, clay for brick ; marl near St. Cloud for lime. Granite ridge across the county, running south-westerly, probably a continuation of the mountain range of Lake Superior, forming the St. Louis River Falls, Rum River Rapids, Sauk Rapids, and the rapids of the Minnesota River. Land $2.50 to $30 per acre—some government in the western part. Population, 1860, 4507 ; 1865, 7367 ; 1869, 15,000 ; Germans, 8000 ; Americans, 4000 ; Norwegians, 1500 ; Irish, 1000 ; others, 500. Vote for Grant, 1030 ; Seymour, 1524.

STATISTICS.—Land assessed, 458,660 acres; value per acre, $2.53; under cultivation, 1867, 21,385 acres; wheat product, 131,533 bushels; school land, 43,295. Assessed property, 1860, $420,903; 1865, $795,373; 1868, $2,089,-648; personal, $672,928. Horses, 2080; cattle, 9603; mules, 136; hogs, 3380; sheep, 5691; carriages, 163; watches, 215; pianos, 37; merchandise, $80,740; money and credits, $26,700. School districts, 69; houses, 47; value, $13,100; scholars, 4281; year's increase, 703. About 18 flour and saw mills—13 run by water; and about 17 churches.

CITIES AND TOWNS.—ST. CLOUD, the county seat, 75 miles by rail from St. Paul, and 180 from Fort Abercrombie, on Red River, has about 3000 population, two-thirds Germans, balance nearly all Americans, some Irish and English. It is the shipping point for 300 tons of Hudson Bay Company's goods; supplies for forts Wadsworth and Abercrombie, and the trade of the Sauk River valleys; is to have a line of steamers above and below next season; is a point on one of the routes of the Northern Pacific Railroad, on a branch of the Superior and St. Paul Railroad, which has a land grant of 10 sections to the mile; on a road to St. Peter and Mankato, which has a grant of swamp lands, and on a road to Minneapolis. It has a $40,000 bridge over the Mississippi; is the site of a State Normal School; has 12 dry goods stores, 12 grocery, 5 hardware, 6 shoe, 4 drug, 3 book, 3 jewelry, 3 furniture, 3 millinery, 3 agricultural implement, 3 flour and feed, 3 meat, and 3 harness shops, doing $1,500,000 of business annually; 5 lumber yards, breweries, a distillery, 2 steam saw mills, 3 sash, door and blind, 5 wagon, and 1 plow factory, 2 brick and lime yards, shops, 13 hotels, 18 saloons, a Catholic, Presbyterian, Methodist, Congregational, and Episcopal church,

Catholic cathedral costing $50,000, 9 lawyers, 4 doctors, and two weekly papers. Building improvements in 1868, $170,000.

SAUK CENTRE is one of the thrifty cities of five or six years' growth, with 1200 to 1500 inhabitants, 14 stores, brewery, grist mill, door and sash factory, 5 hotels, 6 saloons, a Congregational, Presbyterian, Methodist and Episcopal church, a good water-power, and a weekly paper. A heavy business is done here.

RICHMOND, ST. JOSEPH, COLD SPRING, FAIR HAVEN, and CLEARWATER are thriving villages, with each a number of business establishments and a small population.

POST OFFICES at Brockway, Clinton, George Lake, Kennebec, Kimball Prairie, Leedston, Luxemburg, Long Hill, Maine Prairie, Melrose, North Fork, New Munich, Paynesville, Rockville, St. Augusta, Spring Hill, Torah, Zions.

STEVENS COUNTY,

West of Pope, 16 townships, or about 370,000 acres; gently rolling; very rich; fine meadows; 47 lakes, and good running water; timber rather scarce, but fine groves about the lakes. Land nearly all open to settlement, except about one-third owned by the Pacific Railroad, which passes through it. Population a few hundred, mostly Americans and Scandinavians.

ST. LOUIS COUNTY.

St. Louis County, on Lake Superior, with an area of about 6500 square miles, is a heavily timbered, rough,

mineral region, with 75 large lakes. (See "Northern Minnesota.") Population, 1860, 262; 1865, 292; 1869, 1500 to 2000. Vote for Grant, 66; Seymour, 20.

STATISTICS.—Land assessed, 81,549 acres; value per acre, $2.10; school land, one-eighteenth. Assessed property, 1860, $76,186; 1868, $244,303. School districts, 3; houses, 1; value, $700; scholars, 103; year's increase, 21.

In this county are the Vermillion gold mines. Since writing of them in Part First, further developments and tests of the quartz mills and mines have not been encouraging, and the prospect for profitable mining is not brilliant.

DULUTH, the county seat and principal town, the terminus of the Superior and Mississippi Railroad, on Lake Superior, has grown up within this year (1869) from 4 or 5 families to a population of over 1200; and lots from a nominal price to $1500 each. It has the United States land office, a hotel, Episcopal and Baptist church, 20 or 25 business houses, 3 or 4 lawyers, a bank, a weekly paper, real estate offices, and will in time make a large city.

FOND DU LAC is an old Indian trading post, located at the head of navigation on the St. Louis River; has a settlement of about 100 souls, and is the nucleus of a good town.

ONEOTA, on St. Louis Bay, has a settlement of over 500 people, a saw mill, and other business establishments.

VERMILLION LAKE has a post office and small mining settlement. A large amount of money has been expended here in testing the mines, and experiments are still going on.

TODD COUNTY,

North of Stearns, west of Morrison, and east of Otter-tail, 24½ townships, or over 560,000 acres; mostly timber, prairie the exception; southern and middle portion fair, rich sandy loam; northern portion, lighter sandy soil, with groves of pine timber, numerous fine meadows adapted to grazing, and exceptional tracts of heavier soil. Fertile prairie 18 by 2 miles, east of Long Prairie River, Round Prairie 2 by 4 miles, and small prairies among the timber, in the southern portion. Considerable poplar and tamarac, as well as fine bodies of hard wood. Richest land in south-west corner, with upland meadows, yielding 2 and 3 tons per acre; immense and innumerable meadows, as fine as any in the State, along the Long Prairie River, and the whole northern and eastern portion especially adapted to grazing; meadows everywhere, and the yield of grass very large. Good water-power and 3 or 4 saw and grist mills, more wanted; 80 lakes; fish without limit; wild fruits, including cranberries, huckle-berries, and raspberries, in immense quantities. Good prairie and timber claims still open; improved farms of 160 acres worth $2000 to $3000. Population, 1865, 117; 1867, 850; 1868, 1200; 1869, 1600; half Americans, balance Germans, with some Scotch, Irish, French, and others. Religion, Methodist, Catholic, and Covenanters.

STATISTICS.—Land assessed, 70,113 acres; value, $1.94 per acre; school land, one-eighteenth; cultivated, 1867, 460; wheat raised, 4424 bushels; homestead, 26,240. Assessed property, 1867, $153,225; 1868, $170,852; personal, $69,295. Horses, 169; cattle, 760; sheep, 264; hogs, 133; carriages, 6; watches, 42; money and credits, $1805. Schools, 9; houses, 5; value, $875; scholars, 296; year's increase, 37.

Post Offices at Long Prairie and Round Prairie; and a store and grist mill at Long Prairie. No doctor or lawyer in the county.

TRAVERSE COUNTY.—(See Big Stone.)

WABASHA COUNTY,

On the Mississippi River, south-east of Goodhue, has 13 townships, or nearly 300,000 acres. A fine agricultural county, mainly prairie, with plenty of timber along the rivers and streams; good water-power; brick and stone for building; lumber cheap; price of land about like the adjoining counties of Winona and Goodhue. Population, 1860, 7191; 1865, 11,363; 1869, about 19,000; Americans, 11,000; Germans and Irish, 5000; Swedes and Norwegians, 1500; others, 1500. Vote for Grant, 1831; Seymour, 1143.

Statistics.—Land assessed, 286,157 acres; value per acre, $4.72; school land, 2172; homestead, 17,870; under cultivation, 1867, 57,125; wheat product, 692,783 bushels. Assessed property, 1860, $941,985; 1865, $1,866,867; 1868, $2,686,924; personal, $1,005,856. Horses, 4455; cattle, 7490; mules, 129; sheep, 2556; hogs, 4122; carriages, 447; watches, 363; pianos, 37; merchandise, $130,280; money and credits, $75,610. School districts, 92; houses, 69; value, $45,360; scholars, 5067; year's increase, 710.

Towns and Villages.—Wabasha, the county seat, has over 2000 population—vote for President, 339—an Episcopal, Catholic, Methodist, and Congregational church, a weekly paper, 5 lawyers, 3 doctors, about 15 stores, 4

hotels, door, sash, and blind, and agricultural implement factories, steam flouring mill, 17 saloons, &c.

Lake City has about 3000 population—vote for President, 508—an Episcopal, Catholic, Methodist, Congregational, and Baptist church, a weekly paper, about 25 stores, a bank, 2 flouring mills, &c., &c. It claims to have shipped 502,283 bushels of wheat in 1868.

Plainview has about 1000 population, Reeds Landing and Minneiska about 500, and Mazeppa 350.

Post Offices.—Bear Valley, Cook's Valley, Elgin, Forest Mound, Glasgow, Gopher Prairie, Lincoln, Lyon, Melville, Mt. Pleasant, Old Abe, Pawseline, Smithfield, South Troy, Watopa, West Albany, West Chester, and Woodland.

WASECA COUNTY,

Between Steele and Blue Earth—similar in agricultural resources; 12 townships, or about 276,000 acres; 20 lakes. Population, 1860, 2599; 1865, 4174; 1869, over 8000; half Americans, quarter Irish, one-eighth Swedes and Norwegians, one-sixteenth Germans. Vote for Grant, 817; Seymour, 518.

Statistics.—Land assessed, 202,032 acres; value per acre, $4.14; school land, 3000; cultivated, 1867, 14,312; wheat product, 118,855 bushels. Assessed property, 1860, $363,683; 1865, $582,816; 1868, $1,228,379; personal, $430,164. Horses, 1443; cattle, 3983; mules, 18; sheep, 2721; hogs, 1813; carriages, 252; watches, 87; pianos, 5; merchandise, $36,320; money and credits, $23,189. School districts, 72; houses, 50; value, $15,341; scholars, 2493; year's increase, 259.

Villages.—Waseca, on the railroad, a two-year-old town, has a weekly paper, 6 hotels, 16 stores, 5 produce

dealers, and other establishments, 3 lawyers, several churches, and is a flourishing village.

WILTON, the county seat, has 5 or 6 stores, 3 hotels, 3 lawyers, 2 doctors, a weekly paper, churches, &c.

POST OFFICES.—Blooming Grove, Cobb River, Janesville, Marine, Okaman, Pedlar's Grove, and Vivian.

WASHINGTON COUNTY,

East of Ramsey and bordering 40 miles on the St. Croix, has over 10 townships, or 230,000 acres; 3 or 4 townships in the southern part of first-rate soil, prairie and oak openings; heavy timber in the north-east; large meadows in the north-west; and the central part broken, oak openings of second-rate quality. Price of land, $3 to $50 per acre. Over 40 lakes. Brick, stone, and lumber for building. Population, 1849, over 1000; 1860, 6105; 1865, 6780; 1869, about 11,000. Americans, 5000; Germans, 1500; Irish, 1650; Swedes and Norwegians, 1800; Canadians, 600; English, 150; Scotch, 150; French, 150. Vote for Grant, 1061; Seymour, 707.

STATISTICS.—Land assessed, 241,976; value per acre, $5.24; school land, 6966; cultivated, 1867, 41,047 acres; wheat produced, 376,445 bushels. Assessed property, 1860, $2,012,320; 1865, $1,802,372; 1868, $3,043,191; personal, $1,050,754. Horses, 2168; cattle, 4628; mules, 126; sheep, 3486; hogs, 2596; carriages, 248; watches, 325; pianos, 50; merchandise, $258,508; money and credits, $135,528. School districts, 48; houses, 44; value, $28,275; scholars, 3020; year's increase, 387.

CITIES AND TOWNS.—STILLWATER, the county seat, had 609 population in 1849; 1865, 2145; and 1869, about

4000; four-tenths American, two-tenths Irish, two-tenths German, one-tenth Scandinavian, one-tenth French, Scotch, &c. Eight leading houses sell $1,575,000 worth of goods per year. Exports of lumber, 1868, 41,000,000 feet; logs, 89,000,000; leaving in boom, 15,000,000. Value, at $12 for logs and $15 for lumber, at Stillwater, $1,668,-000. 225 rafts left Stillwater in 1868, requiring each 23 men. The St. Croix pineries give employment to 6000 men.

Expended for building, 1868, for a court house $50,000, total expenditure, $171,000. Assessed property: real estate, $539,000; personal, $472,000.

Forty-eight inmates of the Penitentiary produce annually $50,000 of tubs, buckets and barrels. There are 3 steam saw mills, 1 water mill, 1 flouring mill, 45 business houses, 7 lawyers, 6 doctors, 1 bank, 2 Presbyterian churches, 2 Catholic, 1 Episcopal, and 1 Methodist; 3 hotels, 10 or 12 saloons, 4 livery stables, &c.

MARINE MILLS had 173 population in 1849, and now has over 300.

AFTON, LAKELAND, and POINT DOUGLAS are the neuclei of small villages.

POST OFFICES.—Cottage Grove, Lohmansville, Newport, and Oakdale.

WATONWAN COUNTY,

Next west of Blue Earth; gently rolling prairies of dark, rich soil; 12 townships, or 276,480 acres; 20 lakes; timber around the lakes and water courses—heavy bodies in north-east, scarce in west. Population, 1865, 249; 1869, about 2000; half Norwegians, 700 Americans, 300 Germans, Irish, &c. Vote for Grant, 199; Seymour, 57.

STATISTICS.—Lands assessed, 19,530 acres; $3.36 per acre; school land, 16,796; under cultivation, 1241 acres; wheat product, 13,806 bushels. Assessed property, 1865, $72,724; 1868, $118,261; personal, $63,566. Horses, 239; cattle, 964; mules, 8; sheep, 511; hogs, 113; carriages, 7; watches, 20; merchandise, $2500; money and credits, $910. School districts, 7; houses, 1; value, $500; scholars, 446; increase, 220.

VILLAGES.—MADELIA, the county seat, is on the line of the Sioux City Railroad, and will be reached in 1870, has 4 stores, 2 of which each sell $50 worth of goods per day; a fine flouring mill and saw mills, 2 saloons, shops, &c., a Methodist and Baptist church society, and a Masonic lodge.

POST OFFICES.—Antrim and Norwegeon.

WINONA COUNTY.

Area 400,000 acres; eastern portions broken, with fertile and extensive valleys; western and middle rich rolling prairies; heavy growth of oak along the river bluffs; dense bodies of hard wood in the south-eastern townships; well watered; limestone, brick, and lumber for building; fine natural meadows; and good water-power. Price of wild land, $2 to $6 and $12; improved, $10 to $50—average, $20. Population, 1847, 1; 1851, 5 or 6; 1852, 200; 1854, 800; 1860, 9756; 1865, 15,638; 1869, 23,000; two-thirds Americans, balance Germans, Irish, Scotch, English, Norwegians, and others; Germans predominating. Flouring mills (water,) 18, besides saw mills; churches, over 20.

STATISTICS.—Land assessed, 373,177 acres; $4.83 per acre; school land, 5925; cultivated, 1867, 74,054 acres;

wheat product, 748,172 bushels. Assessed property, 1860, $2,241,710; 1865, $2,285,436; 1868, $4,405,462; personal, $1,350,462. Horses, 4663; cattle, 8692; mules, 119; sheep, 4013; hogs, 4157; carriages, 600; watches, 277; pianos, 68; merchandise, $383,316; money and credits, $235,474. School districts, 104; houses, 87; value, $99,151; scholars, 7025; year's increase, 415.

CITIES AND VILLAGES.—WINONA, the third city in population and claiming to be second in commercial importance, is beautifully located on a prairie 9 miles by 3, is the terminus of the Winona and St. Peter Railroad, the Winona Eastern connection with the Milwaukee and St. Paul, and several other projected roads; and is the river outlet for a large portion of Minnesota and Wisconsin. It is the fourth primary grain market in the United States, being next to Milwaukee, Chicago, and Toledo.

Grain Trade.—Exports of wheat, and flour reduced to wheat, 1859, 130,000 bushels; 1868, 2,432,086; barley, 77,702 bushels.

Railroad and River Business.—Received by rail, 1868, 68,670 tons. Four daily lines of steamboats; 1869 arrivals up and down. Navigation from March 21st to December 8th.

General Business.—1868, dry goods about $600,000; groceries, 2 houses, wholesale, $500,000; hardware, $300,000; boots and shoes, $150,000; clothing, $125,000; drugs, $175,000; liquors, $80,000; furniture, $50,000; lumber, $600,000; agricultural implements, $644,130.

Manufactures.—Two flouring and 2 saw mills, 2 foundries and 1 railroad car and machine shop, 6 sash and door, 1 steam pump, 1 furniture, 7 wagon and carriage, 3 fanning mill, 1 agricultural implement, 1 patent fence, and 3 cigar manufactories, are the principal establishments.

Population.—1853, 60; 1855, 800; 1860, 2900; 1865, 4439; 1866, 5760; 1867, 6550; 1868, 7560; 1869, about 9000. Vote for Grant, 745; Seymour, 761.

Assessed Property.—1867, $1,369,000; 1868, $2,080,000. Assessed at 45 per cent. of cash value.

Building Improvements.—In 1867 cost $304,375; 1868, $455,790—$106,650 being for brick stores and business houses.

Price of Lots.—Best business lots, $100 to $150 per foot; residence lots, in best part of city, $150 to $800—a few choice at $1000 to $1200.

Churches.—Thirteen, costing $100,000, and representing all the leading denominations, besides 1 Unitarian, 1 Advent Christian, 1 German Presbyterian, 1 Evangelical Association.

Miscellaneous.—City debt, $100,000, due in 20 years. Mortality, 1867, 98 interments; 1868, slight increase. Banks, 3; capital, $300,000. Normal school, with 315 scholars. One daily and weekly paper, and 1 weekly. One Good Templar, 3 Masonic, and 2 Odd Fellows' lodges; 1 library, 1 Young Men's Christian, and 1 German Dramatic association; Turners, Fenians, &c.

St. Charles, 30 miles by rail from Winona, has grown up within a few years to over 1200 population. It has 25 or 30 stores, a weekly paper, a Methodist, Presbyterian, Congregational, Baptist and Episcopalian church, and is a thrifty and prosperous town. Annual receipts of wheat at the elevator from first hands, 500,000 bushels.

Stockton has 300 population, 2 flouring mills, 2 stores, a furniture factory, &c., &c., and is a thriving pretty village.

Saratoga, a pleasant village, same population, church, &c., &c.

Minnesota City has a fine water-power and 2 flouring mills, costing $70,000, with a daily capacity of 225 barrels.

Lewiston has 200 population, 7 or 8 stores and saloons, a grain elevator, shops, &c.

Pickwick has a large flouring mill, with a capacity of 100 barrels per day.

The other villages are Troy, Dresbach, Enterprise, Utica, Whitewater Falls, Elba, Beaver, Homer, Centreville, Richmond, and Mount Vernon, most of which have from 1 to 3 stores, good flouring mills, and a local trade. Valuable water-powers in the Whitewater; land very fertile, scenery grand and picturesque, fishing fine.

Post Offices.—Argo, Frank Hill, Hart, Jefferson, La Moille, New Boston, New Hartford, North Warren, Oak Ridge, Ridgeway, Rolling Stone, Twin Grove, Wiscoy, Witoka, Worth, Wyattville.

WILKIN COUNTY,

On Red River, about 30 townships of rich level prairie; timber scarce. No stone; extensive marl beds; clay for brick; fine salt springs. Good market at Fort Abercrombie, across the river. Sparsely settled as yet; land nearly all open.

McCauleysville, the only village. Breckinridge has lots, but no houses; terminus of railroad, and will be reached in 1870.

WRIGHT COUNTY,

Adjoining Hennepin; over 20 townships, or 460,000 acres; gently undulating; a fine agricultural county; in

the "Big Woods;" nearly seven-eighths rich timbered land. Mooer's Prairie in south-western part, Clearwater and Monticello prairies have each 15 to 20 square miles of medium quality of soil. A belt of brush land and "openings," 5 miles wide, between Monticello and Clearwater prairies. 115 lakes. Brick and lumber, but no stone, except boulders; good water-power. Land, $5 to $10 unimproved. Population, 1860, 3270; 1865, 5028; 1869, over 10,000; half Americans, one-fifth Irish, one-eighth Germans, one-eighth Swedes and Norwegians, balance French, English, &c. A Kentucky and Virginia settlement in south-west corner. Vote for Grant, 985; Seymour, 623. Five or 6 grist and 10 or 12 saw mills; 12 to 14 churches.

STATISTICS.—Lands assessed, 245,839 acres; $2.53 per acre; homestead, 43,186; railroad, 130,000; school, 20,148; cultivated, 1867, 12,784 acres; wheat produced, 90,869 bushels. Assessed property, 1860, $520,789; 1865, $576,748; 1868, $1,022,263; personal, $406,847. Horses, 1230; cattle, 6823; mules, 26; sheep, 3919; hogs, 2918; carriages, 166; watches, 111; pianos, 7; merchandise, $22,660; money and credits, $10,457. School districts, 79; houses, 47; scholars, 2996; year's increase, 313.

VILLAGES.—MONTICELLO has about 450 population; mercantile business, $150,000; Methodist and Congregational church; 2 lawyers, 2 doctors, weekly paper, 2 saw mills, shops, &c.

CLEARWATER has over 300 population; mercantile business, $120,000; 2 grist mills, chair factory, a church, a lawyer, 2 doctors, shops, &c.

ROCKFORD has 200 population; mercantile business, $60,000; grist and 2 saw mills, business, $18,000; spoke and hub factory, $4000; a lawyer, doctor, Presbyterian church, shops, &c.

BUFFALO is the county seat, with 100 population.

CROW RIVER is a new town, laid out on the railroad in 1868, has several stores, and is a growing place.

DASSEL is also a railroad village just springing up.

POST OFFICES.—Albion, Big Woods, Cassel, Chatham, Corrinna, Dean Lake, French Lake, Lake Mary, Lilley Pond, Maple Lake, Melody Lake, Middlesville, Montrose, Mooer's Prairie, Otsego, St. Michael's, Zellingen.

GROWTH OF THE COUNTIES IN PERSONAL PROPERTY AND LIVE STOCK, UP TO JANUARY 1ST, 1870.

From State Auditor's Office.

The following are the Assessors' Returns, for 1869, *as corrected by the State Board of Equalization, November*, 1869.

Anoka.—*Assessed property, $99,546; horses, 241; cattle, 1086; mules, 28; sheep, 415; hogs, 230; carriages, 32; watches, 48; pianos, 7; merchandize, $7080; money and credits, $4372.

Benton.—Assessed property, $293,813; horses, 698; cattle, 2564; mules, 11; sheep, 1783; hogs, 655; carriages, 101; watches, 145; pianos, 19; merchandize, $72,230; money and credits, $10,867.

Blue Earth.—Assessed property, $1,251,827; horses, 4362; cattle, 11,016; mules, 55; sheep, 6540; hogs, 4023; carriages, 155; watches, 508; pianos, 44; merchandize, $139,350; money and credits, $79,891.

Brown.—Assessed property, $257,970; horses, 1107; cattle, 4632; mules, 27; sheep, 1349; hogs, 833; carriages, 28; watches, 69; pianos, 4; merchandize, $33,608; money and credits, $3718.

Carver.—Assessed property, $448,297; horses, 1538; cattle, 9800; mules, 24; sheep, 4549; hogs, 5382; carriages, 318; watches, 61; pianos, 7; merchandize, $27,806; money and credits, $17,645.

Chisago.—Assessed property, $323,550; horses, 531; cattle, 2964; mules, 19; sheep, 1514; hogs, 960; carriages, 29; watches, 125; pianos, 5; merchandize, $32,325; money and credits, $71,353.

Dakota.—Assessed property, $1,141,187; horses, 5319; cattle, 9146; mules, 119; sheep, 3408; hogs, 4069; carriages, 434; watches, 452; pianos, 63; merchandize, $110,725; money and credits, $72,211.

Dodge.—Assessed property, $562,971; horses, 2853; cattle, 6900; mules, 67; sheep, 5123; hogs, 1740; carriages, 162; watches, 157; pianos, 21; merchandize, $58,188; money and credits, $52,122.

Douglas.—Assessed property, $314,848; horses, 497; cattle, 2636; mules, 24; sheep, 2114; hogs, 463; carriages, 36; watches, 123; pianos, 3; merchandize, $27,815; money and credits, $15,110.

* Assessed property means the total PERSONAL property only. The real estate as assessed in 1868, remains the same for two years. The growth can be ascertained by reference to the statistics of each county.

Faribault.—Assessed property, $562,368; horses, 2853; cattle, 7887; mules, 56; sheep, 4656; hogs, 1978; carriages, 136; watches, 152; pianos, 1; merchandize, $28,225; money and credits, $33,172.

Fillmore.—Assessed property, $1,375,781; horses, 7560; cattle, 17,964; mules, 108; sheep, 12,236; hogs, 9532; carriages, 400; watches, 298; pianos, 28; merchandize, $131,123; money and credits, $139,184.

Freeborn.—Assessed property, $514,774; horses, 2744; cattle, 10,537; mules, 27; sheep, 4961; hogs, 2344; carriages, 194; watches, 110; pianos, 9; merchandize, $17,350; money and credits, $16,108.

Goodhue.—Assessed property, $1,734,182; horses, 6994; cattle, 14,987; mules, 185; sheep, 7381; hogs, 5429; carriages, 282; watches, 549; pianos, 61; merchandize, $196,334; money and credits, $232,552.

Hennepin.—Assessed property, $1,653,771; horses, 4272; cattle, 9994; mules, 107; sheep, 5162; hogs, 3865; carriages, 798; watches, 608; pianos, 194; merchandize, $243,952; money and credits, $136,129.

Houston.—Assessed property, $773,192; horses, 3559; cattle, 9338; mules, 53; sheep, 6558; hogs, 6911; carriages, 187; watches, 114; pianos, 12; merchandize, $63,950; money and credits, $92,820.

Isanti.—Assessed property, $86,676; horses, 171; cattle, 1528; mules, 2; sheep, 989; hogs, 282; carriages, 25; watches, 49; merchandize, $4650; money and credits, $5270.

Jackson.—Assessed property, $71,933; horses, 228; cattle, 1335; mules, 8; sheep, 489; hogs, 133; carriages, 67; watches, 25; merchandize, $2524; money and credits, $3883.

Kanabec.—Assessed property, $5792; horses, 12; cattle, 61; hogs, 24; merchandize, $200.

Kandiyohi.—Assessed property, $43,829; horses, 123; cattle, 968; mules, 6; sheep, 406; hogs, 62; carriages, 2; watches, 39; merchandize, $1255; money and credits, $1713.

LeSueur.—Assessed property, $420,194; horses, 1914; cattle, 7256; mules, 32; sheep, 4426; hogs, 5969; carriages, 120; watches, 105; pianos, 13; merchandize, $23,110; money and credits, $26,665.

McLeod.—Assessed property, $259,401; horses, 963; cattle, 5183; mules, 7; sheep, 3383; hogs, 1654; carriages, 85; watches, 60; pianos, 3; merchandize, $19,548; money and credits, $13,103.

Manomin.—Assessed property, $8904; horses, 55; cattle, 134; sheep, 276; hogs, 29; watches, 4; pianos, 1.

Martin.—Assessed property, $212,937; horses, 880; cattle, 3081; mules, 15; sheep, 820; hogs, 511; carriages, 9; watches, 68; merchandize, $5188; money and credits, $10,317.

Meeker.—Assessed property, $283,062; horses, 936; cattle, 4223; mules, 34; sheep, 2141; hogs, 969; carriages, 17; watches, 87; pianos, 2; merchandize, $17,571; money and credits, $10 019.

Mille Lac.—Assessed property, $39,672; horses, 122; cattle, 660; mules, 2; sheep, 95; hogs, 105; carriages, 6; watches, 9; pianos, 1; merchandize, $2650; money and credits, $2240.

Monongalia.—Assessed property, $174,514; horses, 487; cattle, 2725; mules, 4; sheep, 1760; hogs, 361; carriages, 33; watches, 77; pianos, 1; merchandize, $5880; money and credits, $10,202.

Morrison.—Assessed property, $86,126; horses, 305; cattle, 1369; sheep, 612; hogs, 619; carriages, 25; watches, 43; pianos, 3; merchandize, $2700; money and credits, $7560.

Mower.—Assessed property, $485,422; horses, 2728; cattle, 6569; mules, 50; sheep, 2820; hogs, 1521; carriages, 183; watches, 133; pianos, 24; merchandize, $54,742; money and credits, $39,303.

Nicollet.—Assessed property, $573,644; horses, 2043; cattle, 7329; mules, 24; sheep, 3191; hogs, 1537; carriages, 126; watches, 202; pianos, 12; merchandize, $95,065; money and credits, $52,804

Olmsted.—Assessed property, $1,726,364; horses, 7195; cattle, 13,214; mules, 208; sheep, 5383; hogs, 4768; carriages, 294; watches, 480; pianos, 59; merchandize, $218,400; money and credits, $216,706.

Pine.—Assessed property, $6751; horses, 19; cattle, 45; sheep, 11; hogs, 21; carriages, 1; watches, 6; merchandize, $1500; money and credits, $500.

Pope.—Assessed property, $184,172; horses, 307; cattle, 2051; mules, 23; sheep, 753; hogs, 1[illegible]5; carriages, 6; watches, 90; merchandize, $5940; money and credits, $7401.

Ramsey.—Assessed property, $2,554,377; horses, 1488; cattle, 965; mules, 69; sheep, 390; hogs 1133; carriages, 444; watches, 585; pianos, 233; merchandize, $742,488; money and credits, $134,503.

Redwood. Assessed property, $65,888; horses, 213; cattle, 615; mules, 27; sheep, 232; hogs, 75; carriages, 10; watches, 33; pianos, 2; merchandize, $8547; money and credits, $6358.

Renville.—Assessed property, $199,737; horses, 414; cattle, 2362; mules, 12; sheep, 767; hogs, 272; carriages, 11; watches, 72; pianos, 2; merchandize, $3 30; money and credits, $12,974.

Rice.—Assessed property, $1,053,779; horses, 3963; cattle, 9399; mules, 65; sheep, 6961; hogs, 4431; carriages, 3-9; watches, 322; pianos, 53; merchandize, $163,420; money and credits, $160.150.

Scott.—Assessed property $479,658; horses, 1914; cattle, 7476; mules, 73; sheep, 3858; hogs, 4821; carriages, 72; watches, 92; pianos, 11; merchandize, $52,803; money and credits, 19,531.

Sherburne.—Assessed property, $135,672; horses, 413; cattle, 2029; mules, 15; sheep, 1192; hogs, 337; carriages, 32; watches, 68; pianos, 5; merchandize, $5390; money and credits, $8764.

Sibley.—Assessed property, $271,774; horses, 1503; cattle, 6299; mules, 20; sheep, 3901; hogs, 2464; carriages, 14; watches, 37; pianos, 4; merchandize, $21,120; money and credits, $9272.

Stearns—Assessed property, $695,642; horses, 2289; cattle, 9905; mules, 141; sheep, 5201; hogs, 4165; carriages, 260; watches, 186; pianos, 36; merchandize, $94,579; money and credits, $29,371.

Steele.—Assessed property $560,817; horses, 2289; cattle, 6434; mules, 37; sheep, 2823; hogs, 1549; carriages, 195; watches, 240; pianos, 28; merchandize, $81,330; money and credits, $63,506.

Todd.—Assessed property, $103,082; horses, 217; cattle, 1142; mules, 6; sheep, 325; hogs, 195; carriages, 11; watches, 45; money and credits, $3588.

Wabasha.—Assessed property, $1,151,920; horses, 4670; cattle, 7578; mules, 164; sheep, 2286; hogs, 4226; carriages, 329; watches, 321; pianos, 58; merchandize, $157,165; money and credits $29,484.

Waseca.—Assessed property, $392,782; horses, 1819; cattle, 5030; mules, 28; sheep, 2679; hogs, 1925; carriages, 102; watches, 100; pianos, 4; merchandize, $30,944; money and credits, $23,516.

Washington.—Assessed property, $1,000,406; horses, 2260; cattle 4765; mules, 142; sheep, 2597; hogs, 2764; carriages, 224; watches, 267; pianos, 52; merchandise, $152,514; money and credits, $115,838.

Watonwan.—Assessed property, $120,362; horses, 320; cattle, 1370; mules, 14; sheep, 408; hogs, 168; carriages, 6; watches, 19; merchandize, $4625; money and credits, $3650.

Winona.—Assessed property, $1,610,407; horses, 5123; cattle, 8926; mules, 162; sheep, 3772; hogs, 4007; carriages, 472; watches, 291; pianos, 71; merchandize, $349,557; money and credits, $236,991.

Wright.—Assessed property, $471,679; horses, 1438; cattle, 8285; mules, 18; sheep, 4198; hogs, 4142; carriages, 99; watches, 117; pianos, 5; merchandize, $27,975; money and credits, $11,261.

[Summary on following page.]

TOTAL OF PERSONAL PROPERTY IN THE STATE, INCLUDING LIVE STOCK, JAN. 1ST, 1870.—Total personal, $26,845,450, one year's increase, $1,075,505; horses, 93,949, increase, 10,240; cattle, 860,370, increase, 624,944; mules and asses, 2328, increase, 446; sheep, 134,851, decrease, 11,747; hogs, 103,808, increase, 12,332; carriages, 7088, decrease,* 465; watches, 7791, increase, 318; pianos, 1161, increase, 117; merchandise, $3,546,571, decrease, $185,912; moneys and credits, $2,364,455, increase, $5481. The increase in each county may be seen by reference to each.

RATES OF VALUATION.—Average value as assessed in 1868—a fair sample of other years: horses, $69.67; cattle, $18.96; mules and asses, $74.53; sheep, $1.26; hogs, $2.46; carriages, $45.22; watches, $19.19; pianos, $132.63.

Merchandise is the monthly average value of stocks on hand during the year, and is rated very loosely all the way from 20 per cent. of the fair wholesale value to 50 per cent. Money and credits include book accounts over and above debts, money loaned, and cash on hand, and does not approximate in the remotest degree to the actual facts, as one example will illustrate, to wit: Ramsey County returned in 1868, $183,103, and in 1869 about $50,000 less, while the cash bank deposits for 1869, in St. Paul, show $1,417,921. (See page 248.) The same imperfect returns appear all over the State. Live stock alone appears to be assessed at over half the actual value. The State Board, in equalizing, takes 50 per cent. as the standard.

The assessed valuation of live stock in 1869 was $11,959,243.

* This is only apparent. Wagons were heretofore counted in the column with carriages. Now it is changed to the miscellaneous column.

PROGRESS OF MINNESOTA RAILROADS DURING 1869, AND CONDITION, JAN. 1ST, 1870.

	Constructed in 1869, Miles.	Whole line in operation, Miles.
First Div. St. Paul and Pacific, main line ..	52	103
First Div. St. Paul and Pacific, to Sauk Rapids.....		81
Winona and St. Peter.....	10	116
St. Paul and Sioux City.....	10	100
Milwaukee, St. Paul, and Minneapolis		131
Southern Minnesota.....	25	75
Lake Superior and Mississippi.....	57	87
Hastings and Dakota	10	30
St. Paul and Chicago	20	20
Total.....	184	743

It is probably safe to say that during the year 1870 these roads will be extended as follows—the statement as to most of them being based upon reliable data, viz., *cash on hand:*

St. Paul and Pacific, to Breckinridge, 111 miles further by August, 45 miles being now graded.

Lake Superior and Mississippi, to Duluth (entire line,) 63 miles further by July 4th, much of the grading being done.

Winona and St. Peter, to St. Peter and Mankato, 20 miles further.

St. Paul and Sioux City, to Watonwan County, 20 miles further.

Southern Minnesota, the gap between Lanesboro and Austin, or the line beyond Wells, 50 miles further.

Hastings and Dakota, to Glencoe, 40 miles further.

St. Paul and Chicago, to Red Wing, 22 miles further.

AGRICULTURAL PRODUCTS OF THE COUNTIES FOR THE YEAR 1868.

From advance sheets of the Official Report of Pennock Pusey, Esq., Assistant Secretary of State, to the Legislature, January, 1870.

Counties.	Total Tilled Area.	Wheat.		Oats.		Corn.		Rye.		Potatoes.		Wool.	Butter.	Cheese.
		Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.	Acres.	Bushels.	Pounds.	Pounds.	Pounds.
Anoka.....	3,779	1,244	18,309	538	12,591	1,453	39,420	141	2,057	252	38,518	6,287	40,432	3,116
Benton.....	773	227	2,814	213	4,649	177	5,344	16	142	114	14,308	1,163	11,633	5,450
Blue Earth..	44,307	27,987	500,709	7,224	306,181	4,654	198,488	85	1,963	948	84,602	19,053	209,495	7,200
Brown	11,503	7,426	141,330	2,181	91,097	844	26,365	24	648	266	21,076	4,296	54,958	.....
Carver	20,761	13,164	248,983	3,406	114,952	2,563	101,450	128	3,036	941	75,188	8,099	77,065	1,793
Chisago	3,861	1,498	26,949	912	27,027	522	15,378	253	3,717	171	27,285	3,718	34,190	820
Crow Wing.	203	27	730	59	1,900	27	600	...	....	10½	2,045	.....	1,415	48
Dakota.....	95,404	68,723	1,084,519	12,306	462,481	5,691	186,218	53	837	985	74,089	11,757	171,255	2,360
Dodge.....	43,921	27,521	481,215	8,146	257,752	2,982	111,999	7½	118	304	39,700	18,957	127,069	7,470
Faribault...	30,218	20,331	347,928	5,707	240,733	3,168	132,226	1	10	570	55,398	19,561	170,071	9,407
Fillmore....	141,281	89,859	1,661,054	21,571	941,945	15,775	562,652	91	1,594	931	86,695	37,403	317,129	11,395
Freeborn...	29,389	18,208	334,056	5,068	200,499	3,889	160,698	13	279	579	72,626	12,143	173,370	2,113
Goodhue ...	119,485	81,896	1,595,542	14,381	590.124	6,372	246,255	108	2,426	774	64,709	23,207	316,572	10,417
Hennepin...	35,201	20,770	328,763	5,325	154,129	6,134	204,001	267	4,650	1,068	119,969	14,648	131,024	3,090
Houston....	55,245	29,941	521,172	6,290	213,438	7,863	313,653	28	505	549	47,006	26,173	212,874	10,000
Isanti	1,226	516	8,227	162	5,740	281	7,449	149	2,534	86	13,905	1,984	10,175	135

Jackson	1,415	814	12,229	165	6,020	292	7,370	...	....	32	6,247	1,013	22,620	2,320
Kanabec....	162	4	100	45	1,275	48	1,550	...	....	17	1,507	.....	.....	.....
Kandiyohi ..	760	437	6,525	75	2,462	163	2,871	...	....	78	9,316	1,055	9,665	.....
Lake	50	7	225	.....	150	.....	.....	...	....	8	1,125	.....	360	.....
Le Sueur ...	.....	9,419	193,798	2,980	118,118	4,479	204,291	23	459	953	93,060	75,133	59,462	325
McLeod	9,660	6,015	102,699	1,963	66,840	1,083	39,957	27	590	357	44,383	10,638	66,501	9,839
Manomin...	367	168	3,360	60	2,400	90	270	...	....	25	2,500	400	4,000	.....
Martin	7,474	4,024	62,174	1,456	54,271	1,244	38,766	...	....	245	22,546	2,196	65,917	1,133
Meeker.....	7,832	4,153	74,080	1,271	42,773	705	23,182	2	41	356	61,109	4,427	53,373	100
Mille Lac...	1,250	370	4,594	243	7,636	484	12,645	8	233	63	5,146	616	4,246	515
Monongalia.	3,469	2,450	39,712	583	20,567	173	4,340	5	48	188	18,763	3,572	26,140	875
Morrison ...	1,781	572	7,873	499	1,595	377	12,630	59	572	141	27,335	930	13,166	.....
Nicollet	20,031	11,482	173,756	5,663	186,630	1,518	33,436	108	2,039	418	29,560	9,469	82,177	10,754
Olmsted....	120,105	83,462	1,571,878	16,625	730,370	7,766	314,664	6	124	788	90,432	12,826	273,848	11,455
Otter Tail ..	800	416	5,000	200	7,000	.....	.....	...	....	75	9,000	.....	.....	.....
Pope	2,721	1,273	19,090	491	13,697	49	1,118	...	....	120	21,615	1,078	16,734	1,150
Ramsey	8,050	2,897	58,267	1,357	42,500	995	38,260	63	1,433	461	50,476	2,266	48,127	6,500
Renville....	1,325	599	4,834	431	6,542	173	1,783	...	....	49	6,333	554	6,369	.....
Rice.....	45,834	27,641	484,184	7,125	272,311	4,872	214,810	37	774	754	89,168	21,253	209,918	5,475
Scott.....	25,610	15,520	282,083	3,743	11,184	3,136	111,819	154	4,154	663	52,009	10,162	109,550	906
Sibley.....	26,743	14,391	281,650	5,207	138,642	2,390	95,205	180	4,335	2,280	146,070	.....	9,915	95,637
Stearns.....	35,750	15,732	232,993	9,761	241,503	1,649	50,626	109	1,727	1,122	156,613	11,824	91,527	4,750
Todd.....	1,516	778	10,547	309	6,207	70	679	...	....	100	19,475	1,666	10,375	70
Wabasha ...	75,841	53,630	963,415	10,231	400,203	5,017	197,106	38	868	682	68,994	2,726	118,348	198
Waseca.....	21,958	14,692	277,882	3,200	135,092	1,700	70,632	...	....	331	50,991	4,671	35,486	4,053
Washington.	48,790	27,034	498,246	5,767	218,406	4,125	126,642	196	3,581	509	62,097	7,271	70,815	.....
Watonwan..	2,727	2,040	38,393	444	21,841	134	4,575	9	156	35	5,449	713	11,884	.....
Winona.....	79,520	50,657	914,010	11,144	442,726	7,661	298,190	21	485	460	46,792	10,197	179,960	2,440
Wright.....	15,270	8,227	143,317	2,444	71,000	3,110	100,147	70	1,621	927	142,992	10,866	107,169	1,432
Sherburne ..	2,294	744	10,724	285	6,547	628	16,845	69	1,259	96	15,982	2,691	20,500	1,065

AGRICULTURAL PRODUCTS OF THE COUNTIES FOR THE YEAR 1868.—CONTINUED.

COUNTIES.	BARLEY.		SORGHUM.		BEANS.		MAPLE SUGAR.		HAY.		TIMOTHY.		BUCK-WHEAT.		MISC'LANEOUS.	
	Acres.	Bushels.	Acres.	Gallons.	Acres.	Bushels.	Gallons.	Pounds.	Acres.	Tons.	Acres.	Tons.	Acres.	Bushels.	Acres.	Value.
Anoka	10	152	.....	.....	32.00	378	....	160	1,998	3,726	15¾	29	38½	486	56	$2,302
Benton.....	2	38	.....	.....	9.50	133	410	1,210	951	2,420	....	....	....	....	14	862
Blue Earth..	507	22,552	89.50	8,894	29.50	460	534	3,873	7,544	15,261	48	20	21¼	265	183	6,863
Brown	335	10,390	83.00	3,754	2.62	19½	182	256	1,492	11,402	18	64	2	21	68	2,115
Carver	485	14,327	.50	74	14.75	76	1,062	2,782	5,910½	11,428	42½	75	9¼	151	....	2,504
Chisago	47	913	.12	10	17.50	553	499	4,154	924¾	1,829	4	7½	3¼	38	16¼	2,517
Crow Wing.	....	.....	.....	.....	3.50	39	....	.....	.....	.....	....	....	....	....	....	.....
Dakota.....	558	13,919	5.33	534	20.00	167	50	.....	6,688½	10,726	25	107	44	674	124½	5,804
Dodge.....	683	19,195	9.33	1,115	12.12	192	20	610	4,585	9,649	639	583	112	1,713	103	7,770
Faribault...	303	9,255	84.25	5,633	19.00	470	....	.....	.....	12,883	14	23	19½	708	....	6,216
Fillmore....	1,808	50,683	11.00	1,051	32.00	627	272	8,512	12,657	19,036	893	450	95½	189	84	6,502
Freeborn...	78	2,124	130.25	10,894	15.81	221	90	.....	8,450	25,839	12½	14	39¾	690	12	1,502
Goodhue ...	15,58	48,743	6.18	637	29.70	461	90	600	13,630	21,988	124¼	12	98½	1,658	481	11,887½
Hennepin...	136	3,673	16.00	965	71.00	804	2,804	106,336	7,424	11,995	78¼	89	33	626	98¼	11,569
Houston....	771	23,211	16.00	1,047	9.00	300	....	.....	10,270	19,304	19	33	32	505	....	.....
Isanti	5	71	.....	.....	12.00	229	60	224	.....	2,366	....	....	4	50	99	9,025
Jackson	5	159	14.50	1,136	5.50	72	25	865	1,259	2,528	....	....	½	2	37	745
Kanabec....	....	.....	.....	.....	8.00	179	....	.....	.....	.....	....	....	....	....	40	5,750
Kandiyohi ..	....	14	.....	.....	....	....	....	.....	.....	2,961	....	....	6½	66	....	450
Lake	4	120	.....	.....	....	....	....	.....	31	65	....	....	....	....	3	200

Le Sueur ...	190	5,270	44.00	4,677	34.00	506	1,542	20,408	3,302	5,868	43	79	5½	91	....	.....
McLeod	147	4,024	22.00	2,245	13.00	162	4	4,510	.....	7,495	7	15	25	343	....	10,280
Manomin...	10	200	.....	.....	2.00	30	....	.....	350	700	....	....	12	360	....	.....
Martin	64	669	114.25	10,352	25.25	265	....	.....	.....	.....	....	....	10	105	230	5,151
Meeker.....	92	1,974	7.75	1,043	19.00	317½	122	25	3,458	7,848	2	4	18	219	88	6,451
Mille Lac...	3	67	.....	.....	13.00	165	500	2,060	404	592	....	....	12	175	....	.....
Monongalia.	84	1,472	.....	.....	....	....	....	.....	.....	4,918	....	....	....	....	....	.....
Morrison ...	3	86	.....	.....	21.00	236	....	846	311	838	....	....	4	60	23	1,522
Nicollet	490	10,421	56.75	2,232	12.00	117	....	.....	9,299	20,863	20	71	....	....	240	3,848
Olmsted....	1,908	57,090	5.00	584	24.25	427	453	3,214	10,604	13,114	1119	440	89	1,440	113	6,349
Pope	8	184	.....	.....	13.00	136	....	.....	.....	1,339	....	....	10	155	662	2,781
Ramsey	62	2,150	.....	.....	12.00	141	....	400	1,970	3,030	36	69	18¼	290	175⅛	20,880
Renville....	11	482	14.00	726	15 00	74	....	.....	.....	1,166	....	....	4	36	....	.....
Rice.....	555	14,674	31.00	2,933	21.50	374½	1,369	33,660	10,126	18,181	761	529	194	3,069	89¼	7,466
Scott.....	190	5,285	4.50	462	8.50	127	575	2,615	7,380	14,042	15½	29	53	903	176½	6,050
Sibley.....	2,395	50,270	.....	.....	....	....	....	.....	.....	.....	....	....	....	....	....	.....
Stearns.....	279	6,774	.....	.....	76.75	607	218	990	6,907	16,226	4	6	33¼	448	74½	10,351
Todd.....	11	268	.....	.....	8.25	130½	239	3,020	842	2,044	....	....	1	24	46	1,524
Wabasha ...	1,007	30,403	9.50	1,032	32.00	264	54	2	3,690	5,653	160	139	54	938	31	3,630
Waseca.....	116	3,076	40.00	5,304	6.00	97	....	400	2,412	12,556	....	....	....	....	40	1,312
Washington	235	7,581	2.50	840	37.25	446	....	200	2,433½	3,002	....	....	5	70	147¼	4,670
Watonwan..	25	872	14.00	1,636	1.50	23	....	.....	.....	.....	....	....	5	70	21¼	1,227
Winona	961	30,794	.....	.....	13.00	201	....	895	9,274	12,297	128	422	73	1,223	40	3,625
Wright.....	137	3,642	22.50	2,397	69.50	918	1,451	23,126	2,535	7,172	9½	38	10	185	238¼	6,717
Sherburne..	3	116	1.50	172	53.00	391½	....	.....	327	2,165	....	....	18	428	91	3,034

Besides the above there were the following articles produced: Clover seed, 114 acres, 258 bush.; Hemp, ¼ acre, ¼ ton; Hops, 22,700 lbs.; Flax, 347 acres, 117,159 lbs. fibre, 3,718 bush. seed; Tobacco, 7.35 acres, 11,980 lbs.

SUMMARY OF THE AREA OF LAND UNDER CULTIVATION, AND THE AGRICULTURAL PRODUCTS OF THE STATE FOR 1868 AND 1869.—From the advance sheets of Mr. Pusey's official report to the Legislature for 1870; reports from all the counties but two or three; estimates from them.

	1868.	Average per acre.	1869.	Average per acre.
Total tilled area....	1,358,780		1,690,000	
Wheat, area.	851,700		1,000,000	
" bushels	15,245,430	17.9	18,500,000	18½
Corn, area.....	129,931		175,000	
,, bushels.....	4,807,447	37	6,125,000	35
Oats, area	203,556		274,800	
" bushels	7,582,461	37¼	11,816,400	43
Potatoes, area	22,000		27,500	
" bushels ..	2,459,600	111	2,475,000	90
Barley, area	15,310		20,400	
" bushels.....	454,700	29.7	625,000	30.6
Rye, area.....	2,605		3,250	
" bushels.....	49,160	19	58,600	18
Buckwheat, area...	1,404		1,750	
" bushels	22,613	16	28,270	16
Hay, area.....	172,480		205,000	
" tons.....	368,512	2.12	430,000	2.08
Wool, pounds.....	385,500		390,000	
Butter, "	4,209,065		5,600,000	
Cheese, "	149,511		145,000	
Beans, area.....	961		1,340	
" bushels.....	12,686	13.02	17,500	13
Sorghum, area.....	775		900	
" gls. syrup	76,400	98.5	80,000	88.8
Maple sugar, pounds	239,802		300,000	
" " gls. syrup	12,930		15,800	
Flax, pounds fibre..	117,159		170,000	
" bushels seed..	3,718		5,000	
Clover seed.....	258		350	
Tobacco.....	11,980		13,500	
Miscellaneous, area.	4,316		4,875	
" value of	$218,884		$254,600	

By comparison of the area and products of 1868, and the average per acre, with those on pages 97–8, 100, and 102, taken from the Governor's Message, the estimates for which were furnished by Mr. Pusey from the best data before him, it will be observed that the actual re-

turns, as shown in the above figures, vindicate the correctness of Mr. Pusey's estimates of a year ago, and their moderation, with singular emphasis. He estimated the area of wheat, 908,500 acres, 16,125,875 bushels, and 17.75 bushels per acre. It turned out to be 851,700 acres, 15,245,430 bushels, and 17.9 bushels per acre. Corn, 115,170 acres, 4,598,760 bushels, and 39.93 per acre. It turned out 129,931 acres, 4,807,447 bushels, and 37 per acre. Oats, 174,500 acres, 6,103,510 bushels, and 34.97 per acre. It turned out 203,556 acres, 7,582,-461 bushels, and 37¼ per acre. Potatoes, 17,500 acres, 1,698,900 bushels, and 97.08 per acre. It turned out 22,000 acres, 2,459,600 bushels, and 111 per acre. This result commends his estimates for 1869, based upon far ampler data and correspondence with every county, to the fullest confidence and credit, as correct and moderate, and rather below than above the actual figures.

THE IMMIGRATION OF 1869.

MINNESOTA LEADS THE WORLD. — "Minnesota has fairly gobbled the brains, muscle, and capital of the world. The steady rush of immigration from Europe and from the older States of the East, and from the populous portions of the Central and Western States into Minnesota, has assumed such proportions as to remind us of Pat's growing potatoes, which were overheard as they spake one to another—'move along—make room;' for the tide of incoming life has vaulted over the old barriers and limitations that the most sanguine of early pioneers had established for the bounds of civilization and settlement."—*La Crosse* (Wisconsin) *Republican.*

The occasion for these glowing remarks, continued at greater length than we have room to quote, was the dispatch from Mr. Litchfield, of London, to Mr. Becker, President of the St. Paul & Pacific Railroad, on the 13th of July, 1869, to *complete the road to Red River during the year*—a distance of 214 miles, only forty of which was then done. Such was the extent of the immigration in that direction that English capitalists had the confidence to back it with millions of money. The editor concludes: "*Minnesota is on the highway to unprecedented prosperity.*"

Carleton, correspondent of the *Boston Journal*, in August, 1869, wrote from the Ottertail Lake country: "We have met to day a long train of wagons, filled with emigrants, who have come from Wisconsin, Illinois, Indiana, and some from Ohio, to make their homes in this fertile region. Look at the wagons as they pass." (Describes the owner or his barefooted boy driving, the grandmother, white-haired, old and wrinkled, the wife with her infant, and three or four romping children on the feather bed; a tin kettle suspended behind, in which a tow-headed urchin is swinging, clapping his hands and playing with a yellow dog trotting behind the team; a hoop skirt, chicken coop, pig in a box, and a barefooted boy with a rosy-cheeked sister behind, driving a cow.)

"Not only along this road, but in every section of the State, we may behold just such scenes. A great army of occupants is moving into the State. The advance is all along the line. Towns and villages are springing up as if by magic in every county. Every day adds thousands of acres to those already under cultivation. The wheat fields of this year are wider than they were a year ago, and twelve months hence will be much larger than to-day." * * * This year the population has increased

nearly 100,000, and the tide never was setting so strong as to-day.

THE FLOOD TIDE OF IMMIGRATION.—The news in the columns of our State exchanges, and from the highways and byways, is all to the effect that we are having a flood tide of immigration such as has not swept over Minnesota for the last twelve years. Thanks to the efforts of Col. Mattson, our State immigration agent, who has been on a visit of months to his home in Sweden, and to the documents sown broadcast by the wise and liberal provisions of our Legislature, the Scandinavian swarms of the North, the hardy Germans of Central Europe, and the sons of the Green Isle,—all are rushing, filled with eagerness and hope, to the free homesteads and healthy climate of Minnesota.

A large proportion of the tide that is daily pouring through our State to the beckoning fields beyond, are Americans; farmers of Wisconsin and Iowa. Wisconsin is fairly moving into Minnesota. The owner of a prairie schooner, who seemed to be an intelligent man, declared yesterday that one-fourth of the whole population of the State of Wisconsin was coming to Minnesota this summer. This statement was, of course, an exaggeration, but it serves to indicate the strength and volume of the current that is setting into our borders. Push on the column! The unclaimed wheat lands of Minnesota, rich as the richest, are still numbered by the millions of acres. No wonder the world is coming to Minnesota, where, under healthier skies, a farm can be had for the taking.—*Mankato Union*, June 15th.

The St. Peter correspondent of the *St. Paul Press*, of June 18th, said:

The immigration which has poured into this part of the State this spring, surpasses by far anything we have ever before had. And it is apparently of a much better class than we have ever had before—abounding in horses, cows, oxen, sheep, &c., &c., in abundance.

The *St. Peter Tribune*, of June, said:

The ferry at St. Peter is crowded from morning till night with goods and chattels of the new comers, and the roads lead-

ing west and north are lined with vehicles and stock bound for the upper country.

The Faribault stage, on its return trip, passed over 200 "movers'" wagons coming in this direction.

The Minnesota Valley has never before witnessed such a tide of immigration as has been almost constantly pouring into it during the past two months. Of course St. Peter does not witness it all, but that which has passed through here for the untamed prairies of the West is immense. Night after night our commons have become the camping ground for many sturdy pioneers with their families, and our adjacent prairies the pasturage for droves of cattle, horses, sheep, &c., all bound for the frontier.

The *Forest City News* said:

Every road leading to the rich and fertile prairies west of the woods is lined with emigrant wagons. Nearly all have fine droves of cattle. It will not be long before every foot of the rich prairies of Meeker, Monongalia, and Kandiyohi counties will be under cultivation.

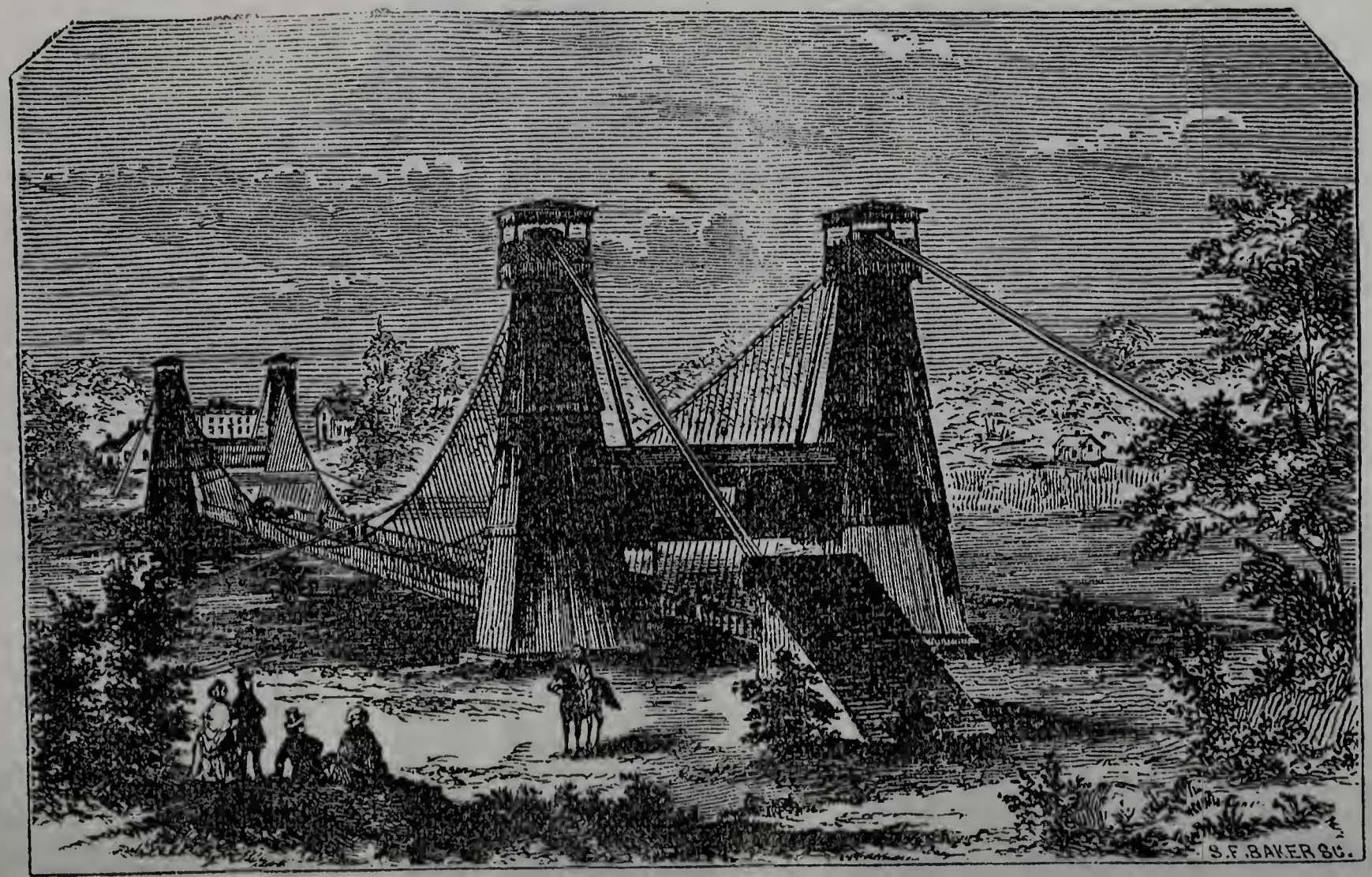
The *Farmington Telegraph*, in June, said:

IMMIGRANTS.—Regularly, twice each day, a car load, and often two, of immigrants from the various countries of Europe, pass through this village on the Milwaukee and St. Paul Railroad. A few stop here, but the larger portion are bound for the northern part of the State. Full ninety per cent. of these immigrants are Scandinavians, the remainder Germans and Irish.

The *Fairmont* (Martin County) *Atlas*, in June, said:

IMMIGRATION.—The heaviest immigration that we have ever witnessed, is pouring into Martin County this season. Already more families have settled among us than for the past two years. The men coming are of the right stamp, industrious and intelligent Americans, though of small means. A man who has intelligence and is industrious, has a very good substitute for dollars in this free country. All such are warmly welcomed by our people.

25 HIGH SCHOOL, WINONA.



SUSPENSION BRIDGE, MINNEAPOLIS,

CONCLUDING SUMMARY.

From Commissioner Pusey's Report.

Population of State, January 1st, 1870	470,000
Value of real estate, as assessed	$66,000,000
True value in currency	$120,000,000
Personal property assessed	$28,000,000
True value in currency	$65,000,000
Number of acres owned and assessed	11,000,000
" soil proprietors	73,121
Value of land and improvements	$81,500,000
" town lots and improvements	$38,500,000
Total tilled area (acres)	1,690,000
Value of live stock	$15,561,887
Value of annual agricultural productions	$25,000,000
Number of county residents (country)	370,000
" town "	100,000
Value of annual manufactures	$11,000,000
Number of railroad companies	13
Miles projected	2,000
Miles constructed	750
Number of vessels in river navigation	193
" " lake "	30
Tonnage of river	60,000
" lake	20,000

From Governor's Message of January 7th, and reports of Auditor McIlrath and Commissioner Pusey.

Exports of wheat, 1869 (bush.)	14,000,000
Wheat still unmoved (bush.)	over 10,000,000
Exports of State products through Pembina	$160,000
Foreign goods exported through Pembina	$455,000
Amount of school fund	$2,371,199.03
Increase in one year	$238,304.45
Amount of logs scaled, 1869 (feet)	305,146,984
Increase in a year	54,897,066
Persons between 5 and 21 years, Sept. 30th, 1869	144,414
Increase in one year	15,311
Improved farms, 1864	23,787
" " 1869	45,740

Land owners, 1864	50,805
" " 1869	73,121
Improved lots, 1864	14,900
" " 1869	23,842
Lot owners, 1864	25,084
" " 1869	37,580
Number of dwelling houses	70,000
Land held by individuals besides homestead claims (acres)	11,000,000
Average amount to each owner (acres)	150.43
Per cent. under cultivation	16.39
Average to each owner cultivated	36.94
Lands entered in 1869 (acres)	861,602
Of this amount, by homestead entry (acres)	356,876

RAILROADS. — The Governor's Message of Jan. 7th says: "I rejoice to be able to inform you that the Northern Pacific Railroad Company have effected an arrangement with the ablest financial parties in the country, for the construction of the road. A telegram received on the 4th inst., informs me that work wlll probably commence in February."

The Governor reports the miles of railroads in operation 780, 224 of which were constructed during 1869—being 37 more miles than is claimed on page 279 of this book, which vindicates the moderation of its statements. The difference is explained by the fact that at the writing of the former statement the rails were laid, on some of the roads, but ballasting not finished, so that the cars were running; and this was not counted as finished road; also by the fact that 12 miles of the Minnesota Central Railroad, from Austin to the State line, were omitted by mistake.

The fact that several thousand men are still at work on our roads in January, will explain the fact that a few weeks time may upset any table of figures on railroad progress that can be given.

BUILDING IMPROVEMENTS OF 1869.—An effort was made to procure the building statistics of 1869, but only a few fragmentary returns have come in. They show, notwithstanding the low price of produce and consequent "hard times," progress, growth, and activity. The following are the only returns that have come in in time for this issue:

St. Paul, 509 buildings, costing $1,395,727; increase over 1869, 148 buildings and $390,677.

Minneapolis, $700,000 (estimated by Secretary of Board of Trade;) increase over 1868, $96,325.

Rochester, 112 houses, $250,000.

St. Anthony, $202,000; increase over 1868, $59,750.

Duluth, 180 buildings; two hotels costing $62,000; town almost entirely built up the past year.

Albert Lea, over 60 houses since September; population increased to 1000.

Northfield, $124,787.

Lake City, $109,000.

Wabasha, $102,725.

Owatonna, $85,000.

St. Cloud, $76,525.

Le Sueur, 33 houses, $36,905.

Kasson, 26 houses, $18,500.

Faribault, $153,076.

No returns so far from the flourishing cities of Winona, Mankato, Red Wing, Hastings, and others.

THE PRESS OF THE STATE.

Arranged alphabetically as to the names of the towns where published.

Democratic papers designated by a *.

Paper.	Publishers or Editors.	Day of Issue.
Anoka Union,	G. S. Pease	Thursday
Anoka Press,	John M. Thompson	Tuesday
Austin Transcript,	Geo. H. Otis	Thursday
Austin Democrat,*	Wood & Lacey	Thursday
Austin Register,	C. H. Davidson	Thursday
Albert Lea Standard,	D. G. Parker	Thursday
Alexandria Post,	W. E. Hicks	Saturday
Blue Earth City Post,	Williams & Stevens	Saturday
Blue Earth City South-West,	Carr Huntington	Saturday
Brownsville Western Progress,	French & Thomas.	Saturday
Caledonia (Houston Co.) Journal,	Wall Bros.	Tuesday
Chaska Herald,*	F. E. Dutoit	Friday
Chatfield Democrat,*	J. H. McKenney & Son	Saturday
Duluth Minnesotian,	Duluth Printing Co., Thomas Foster, ed.	Saturday
Faribault Republican,	A. W. McKinstrey	Wednesday
Glencoe Register,	James C. Edson	Thursday
Garden City Herald,	A. J. Manley	Friday
Hastings Gazette,	Todd & Stebbins	Saturday
Hastings Union,*	Smith & Todd, Seagrave Smith ed.	Wednesday
Jackson Republic,	Geo. C. Chamberlin ed.	
Kasson Republican,	U. B. Shaver	Friday
Lanesboro Herald,	J. L. Christie	Tuesday
Litchfield News,	F. Belfoy	Wednesday
Lake City Leader,	McMaster & Spaulding	Friday
Le Sueur Courier,	Prendergast & Vollmer	Wednesday

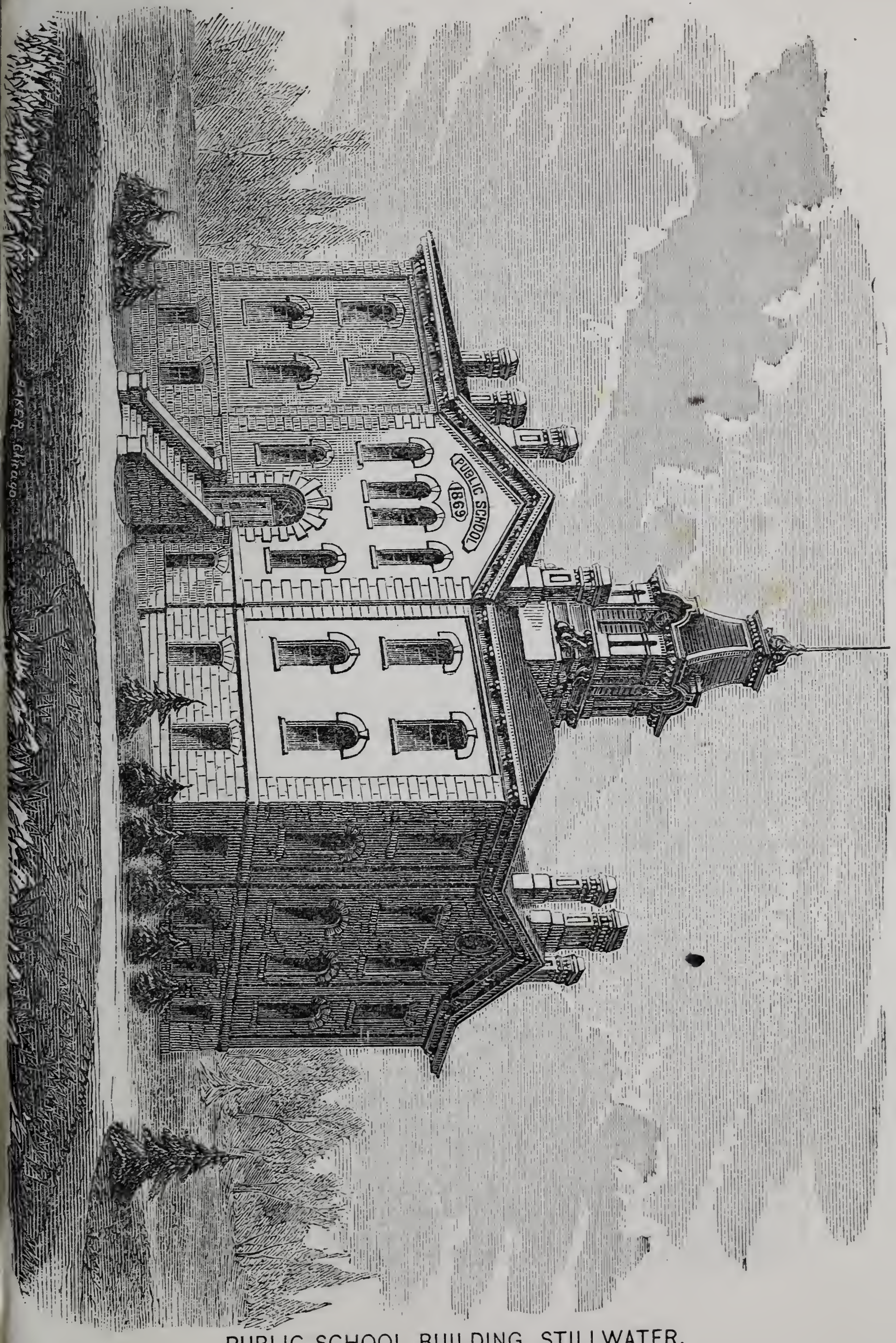
Monticello Statesman, Geo. Gray	Saturday
Mantorville Express, S. L. Pierce	Friday
Mankato Review,* E. C. Payne	Friday
Mankato Record, Orville Brown	Saturday
Mankato Union, Griswold & Cleveland	Friday
Minneapolis Tribune, Tribune Printing Co.	daily
Minneapolis, Minnesota Pupil, Hatch Bros., instruction and amusement of children and youth	semi-m'thly
Minneapolis Farmers' Union, W. A. Nimocks, J. H. Stevens ed.	monthly
Minneapolis Nordisk Folkeblad, Sneedorf Christenson ed.	Tuesday
Minneapolis Independent	
Northfield Standard, Austin Willey ed.	
Northfield Enterprise, L. H. Kelly	Friday
New Ulm Post, L. Naegle	
Owatonna Journal, Spellman, Hickman, & Crandell	Thursday
Preston Republican, W. A. Hotchkiss	Friday
Red Wing Companion, Harrison Lowater	monthly
Red Wing Good Templar, Harrison Lowater	monthly
Red Wing Republican, Jennison & Perkins	Thursday
Red Wing Argus,* C. L. Davis pub., C. F. George ed.	Thursday
Rochester Post, Leonard & Booth, J. A. Leonard ed.	Saturday
Rochester Union,* Union Printing Company	Saturday
Red Wood Falls Mail, V. C. Seward	Friday
St. Anthony Falls Democrat,* Ovid Pinney, Rev. Herman Bisbee ed.	Friday
Stillwater Republican, W. S. Whittemore	Tuesday
Sauk Centre Herald, J. H. & S. Simonton	Thursday
Sauk Rapids Sentinel, Benedict & Gilpin	Friday
Sherburne Co. News* (Elk River,) A. J. Clark	Saturday
St. Cloud Journal. W. B. Mitchell ed. and pub	Thursday
St. Cloud Times,* L. A. Evans, J. J. Green ed.	Saturday

St. Charles Herald, Herald Printing Co., C. H. Slocum ed..... Friday
St. Peter Tribune,* J. K. Moore..... Wednesday
St. Peter Advertiser, T. T. Perry ed.....
Shakopee Argus,* Henry Hinds ed. and pub..... Thursday
Shakopee Spy.....
St. Paul, N. W. Chronicle* (Catholic,) J. C. Devereaux..... Friday
St. Paul Wanderer,* German Catholic Printing Co. Saturday
St. Paul Volksblatt, Leue & Erdman..... Thursday
St. Paul, Minnesota Staatz-Zeitung, T. Sander.... Thursday
St. Paul, Minnesota Tidning, C. Fr. Peterson, ed.. Friday
St. Paul, Minnesota Monthly (agricultural,) Robertson & Bentley, D. A. Robertson ed..... monthly
St. Paul Daily Press, Press Printing Co..... Thursday
St. Paul Daily Pioneer,* Pioneer Printing Co..... Thursday
St. Paul Daily Dispatch, Ramalay & Hall..... Thursday
St. Paul, Teacher..... monthly

Taylor's Falls Reporter, Chas W. Folsom ..... Saturday
Waseca News, Child & Graham..... Wednesday
Wabasha Herald, Frank Daggett ed. and pub..... Thursday
Wells Atlas, C. A. Lounsberry.....
Winona Herald,* Wm. Jay Whipple..... Friday
Winona Republican, D. Sinclair & Co..... daily
Winnebago City Free Homestead, E. A. Hotchkiss. Wednesday

The papers have nearly all 28 columns, and the terms are $2 per year. The Weekly Dispatch of St. Paul is $1 per year; also the Litchfield News, the Blue Earth City South-West, Glencoe Register, and Chaska Herald; Wells Atlas, $1.50; St. Paul Chronicle, Volksblatt, Zeitung, and Wanderer, $2.50; and Duluth Minnesotian, $3. Robertson's Monthly is $1.50, and the Minnesota Farmer's Union 75 cents.

Nearly all offer inducements to clubs, and some give other publications to subscribers. Advertisements to be in time should reach them two or three days before the day of issue.

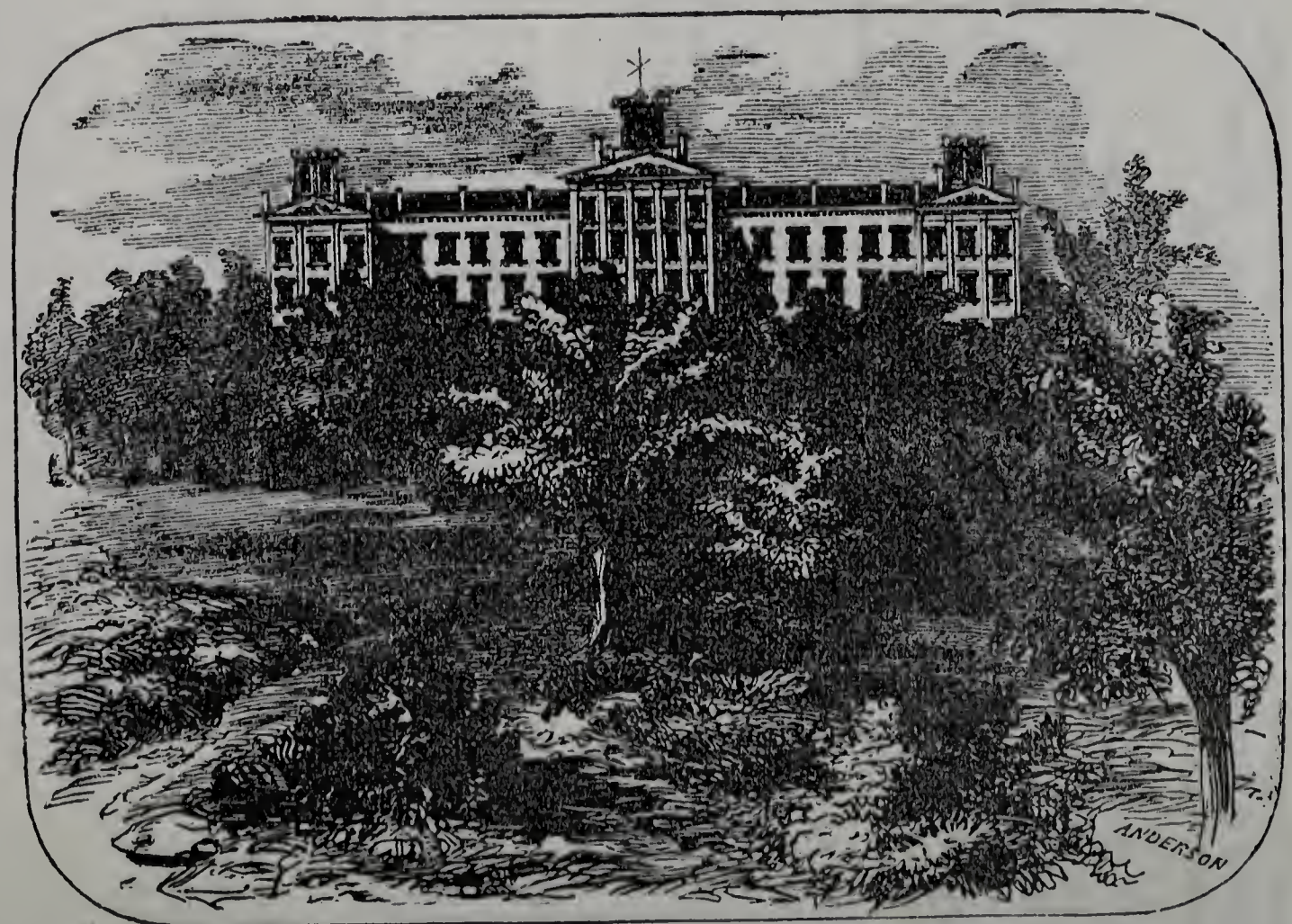


PUBLIC SCHOOL BUILDING, STILLWATER.

INDEX TO ADVERTISEMENTS.

	Page.
Arnold's Clothes Washer	59
Austin, S. J	17
Austin & Rosencranz	16
Bailey, S. L.	13
Babcock's Fire Extinguisher	55
Beach, L., & Co	13
Beaumont, Jos. I.	24
Beecher, Dr. S. A	47
Beck, Roberts & Co	47
Blodget, J. F	48
Boyle, Chas. M	65
Bower, Thomas	17
Brackenridge, W. L	14
Brownell & Co	22
Bryant, Dr.	63
Bryant & Stratton	10
Buck, Daniel	14
Bures, N	61
Cathcart & Co.	3
Central House	11
Chase, A. J., & Co	59
Cheritree & Farwells	24
Churchill, O. A	15
Clarke, Thomas	14
Comstock, Castle & Co	60
Cullen, James	45
Curtice & Halsted	65
Dawson & Co	7
De Montreville, Dr.	60
Dodge, Ossian E	54 & 64
Dodge, Thos. H	15
Everest, Aaron S	14
Engineering and Mining Journal	30
Faber & Natchsheim	17
Farrar, Oscar	18–19
Farrell, W. B	12
Fielding, Seth	59
First National Bank	21
Fitzpatrick, Thos	59
Foos, Andrew	13
Ford, L. M.	46
Galenic Institute	ins. b'k cov.
Gates, Hiram D	20
Garrison, O. E	46
Godfrey, W. J.	12
Golcher, Wm	3
Golden Rule	32
Grant & Brosseau	23
Hall, S. P. & J. C	62
Hankins & Son	43
Health Institute	ins. fr't cov.
Hewitt, Girart	22
Horn, H. J	14
Horn, Robert	40
Hussey, J. G.	14
Illinois Staats-Zeitung	28
Jones, Dr. John	59
Kahlert, C	59
Kennedy, M. F	64
Kiester, Jacob A	15
Koempel, H. J.	56
Kinney, T., & Bro	64
Knight, A. F	63
Kranz, N. F. W	48
Krieger & Keller	8
Lake Sup. & Miss. R. R. Co.	34
Larpenteur, A. L.	11
Lathrop & Kinney	46
Lewis, Joseph	21
Manufacturer and Builder	29
Marcotte, Chas	63
Martin's Art Gallery	5
Martins, Knight & Co	38

	Page.
Mattison's Shirt Factory	42
Matheis, John	66
Merrill, Randall & Co	25
Merrill, G. W. & A. P	8 & 19
McClung, J. W	62
McKelvey, Dr.	7
McDougall, Geo. A.	15
Miller, B. F.	15
Minnesota Monthly	32
Minnesota Farmers' Union	48
Minneapolis Tribune	50
Moore, Alfred	16
Morgan & Metcalf	23
Mullen, Daniel	46
Munch, Bros. & Co	38
New York Observer	27
N. W. Union Packet Co	44
Paine, Parker	21
Palmes, Geo	11
Peabody, Geo. P	11
Picket, Daniel	46
Pomeroy's Democrat	26
Pomeroy & Co	12
Practical Farmer	31
Prendergast & Co	60
Radcliffe, A. M	63
Rose, Robert H	47
Rosencranz, Wm	16
St. Clair, A	61
St. Cloud Journal	48
St. Paul & Sioux City R. R. Co	37
St. Paul Female Seminary	39
St. Paul & Pacific R. R. Co.	36
St. Paul Press	51
St. Paul Pioneer	52
St. Paul Dispatch	53
St. Paul Chamber of Commerce	54
Sauk Rapids Sentinel	60
Schroeder's Museum	5
Sederberg, Alfred	63
Sewell, J. S	65
Smith, A. C	47
Snelling House	17
Spencer & McMahon	46
Southern Minnesota R. R. Co	33
Staples, J.	42
Staples & Berky	12
Summit Avenue House	57
Swan & Bangs	47
Sweet, C. Emmett	15
Timme Bros	45
Tostevin, J. F	41
Wait, L. B	66
Webb, Isaac W	40
Wedelstadt, Dr	60
Weinman, Jos	47
Wharton, R. L	64
Whitney & Zimmerman	4
Wilson & Worley	9
Willey, Dr. Sam	62
Winona Republican	49
Winona & St. Peter R. R. Co	35



STATE UNIVERSITY, ST. ANTHONY.

D. D. MERRILL, RANDALL & CO.,

166 THIRD STREET, ST. PAUL,

WHOLESALE & RETAIL DEALERS IN

BOOKS, STATIONERY,

NOTIONS, TOYS, FANCY GOODS,

SCHOOL STOCK,

Chromos and Photographic Views

Of Minnesota, and other Scenery.

We are Headquarters for all kinds of Photographic, Chromo, and other Pictures.

We have the largest Assortment of Stereoscopic Views in the West.

PICTURES SENT BY MAIL.

Our Stock is unsurpassed in the West, and we invite all to call and make it their convenient place of meeting when on the street.

We have the finest as well as the largest Book Store in the Northwest.

WE KEEP A

LARGE ASSORTMENT OF LUNCH BASKETS,

AND ALL SUCH CONVENIENCES FOR

TOURISTS AND PLEASURE SEEKERS.

D. D. MERRILL, RANDALL & CO.

26 25

Pomeroy's Democrat.

Greatest Inducements for Subscribers ever offered —Read the Great Premium List.

RATES FOR POMEROY'S DEMOCRAT.

SINGLE COPIES, per year, - - - - - - - - - $2 50

TEN COPIES, one year to one post-office (we writing the names of subscribers on each paper), and one copy for the year to the one who sends us the club, - - $20 00

TWENTY COPIES, one year, to one post-office (we writing the names of subscribers on each paper), with an extra copy for the year, and a copy of each of POMEROY'S two books, "SENSE," and "NONSENSE," to the getter-up of the club, - - $40 00

THIRTY COPIES, one year, to one post-office (we writing the names of subscribers on each paper), with two extra copies for the year, and a copy of each of POMEROY'S books, "SENSE," "NONSENSE," and "SATURDAY NIGHT," a new book now in press, to the getter-up of the club, - - - - - - - $60 00

FIFTY COPIES, one year, to one post-office (we writing the names of subscribers on each paper), we give an extra copy of the paper for one year, and a coin silver hunting watch, worth $17, - - - - - - - - - $100 00

SEVENTY-FIVE COPIES one year, to one post-office (we writing the names of subscribers on each paper), we give an extra copy of the paper for a year, and a copy of each of the above-named books, with an extra fine silver hunting full-jeweled "Benedicts' time watch;" or in place of the watch a Hinkley Knitting-Machine, - $150 00

The price of the above watch and of the knitting-machine is $30 each, and the articles are worth the money.

FOR ONE HUNDRED COPIES, one year, to one post-office (we writing the name of subscribers on each paper), - - - - - - - - - $200 00

To the getter-up of each one hundred subscriber club, we will present an extra copy of THE DEMOCRAT, one year, and their choice of one of the following articles:

A lady's fourteen carat fine, full-jeweled, gold, "Benedicts' watch," standard price, $60;

Or, one of "Benedicts' time watches," hunting-case, made from coin silver, standard price, $60—the best silver watch ever sold in the United States;

Or, one of Willcox & Gibbs' sewing machines, with hemmer and feller; price, $60.

Benedict's watches are known all over the country as among the best time watches ever manufactured. They are a standard article, warranted as represented, and worth to the wearer all they are valued at.

The Willcox & Gibbs' sewing-machine is looked upon as the best, most durable, convenient, and deserving yet invented, and is selling more rapidly than any other in the market.

Every premium sent by us—whether it be a Hinkley knitting-machine, an indispensable article in every family; one of Benedict's watches, or a sewing-machine—will be first-class in all respects, and selected by us personally, and warranted by the manufacturers, that the recipient may have a desirable article.

THE DEMOCRAT is considered by every publisher, editor, and newspaper reader in the United States to be worth more than its subscription price. And as the paper is valuable, reliable, and interesting, so will the premiums we send to those interesting themselves in its circulation be of real worth; of benefit to the family or person to whom the same may be sent.

ADDRESS ALL LETTERS on business connected with the office to C. P. Sykes, Publisher, P. O. Box 5,217 New York City.

Letters on political matters should be addressed to M. M. Pomeroy, Editor and Proprietor, and if the writer wishes them to be seen only by the person to whom they are addressed, they should be marked private, when, if Mr. Pomeroy is not in the city, they will be forwarded to him immediately by mail, express, or special messenger.

In ordering papers, be careful to write the names of subscribers with the post-office, county, and State very plain, that there may be no mistakes in entering names or forwarding papers.

Retail price of the paper when sold by newsdealers or newsboys, SIX CENTS.

Additions can be made to clubs at $2 per year.

In forwarding sums of money for clubs of subscribers, drafts or money orders should always be used, as, if lost or stolen, they can be duplicated, and no financial loss will be sustained by the parties interested.

C. P. SYKES, Publisher,
P. O. Box 5,217, N. Y. City.

"AROUND THE WORLD!"

THE

NEW YORK OBSERVER

Is now publishing a series of Letters from the Rev. Dr. E. D. G. PRIME, who is making the tour of the World, by way of California, Japan, China, India, Egypt, &c.; together with various other correspondence, all the News, Religious and Secular, and a great variety of the best Reading, Original and Selected.

Now is the time to secure the oldest and

BEST FAMILY NEWSPAPER.

DOUBLE WEEKLY—RELIGIOUS & SECULAR.

IT BELONGS TO

NO PARTY IN POLITICS, NOR ANY SECT IN RELIGION.

ADVOCATES

UNION IN THE CHURCH

AND

LOYALTY IN THE COUNTRY.

We will send the NEW YORK OBSERVER for one year to

One	New Subscriber	and one Old, for	- - - -	$5.50
Two	" Subscribers,	"	- - - -	5.00
Two	" "	and one Old, "	- - - -	7.50
Three	" "	"	- - - -	7.00
Three	" "	and one Old, "	- - - -	9.50
Four	" "	"	- - - -	9.00
Four	" "	and one Old, "	- - - -	11.50
Five	" "	"	- - - -	11.00
Six	" "	"	- - - -	12.00

And to any larger number at the same rate.

Sample Copies Free. Terms, $3.50 per annum, in advance.

Send by Check, Draft, Post-office Order, or Registered Letter.

SIDNEY E. MORSE, JR., & CO.,

37 Park Row, NEW YORK.

THE

Illinois Staats-Zeitung,

PUBLISHED AT CHICAGO,

IS THE

LEADING GERMAN NEWSPAPER OF THE WEST,

Having no superior among the great German Dailies published in this country, being

THE STANDARD GERMAN REPUBLICAN NEWSPAPER,

And as such more extensively quoted by the Press of the country than any other German publication. By the fearless impartiality of its editorial comments on political events, and by its vigorous advocacy of the sacredness of the national credit, as well as by the fullness and spiciness of its general news columns, it has obtained an enviable reputation among the German population of this country. It is published daily and weekly.

Its literary companion,

Der Westen,

Ranking among the best German literary periodicals, has obtained a circulation inferior to that of no other similar paper in the West.

Daily Illinois Staats-Zeitung - -	$9.00 per annum.
Weekly - - - - - -	2.00 " "
Der Westen, - - - - -	2.00 " "

Agents allowed a commission of twenty per cent. on subscriptions.

ADDRESS,—

ILLINOIS STAATS-ZEITUNG CO.,

104 Madison street, CHICAGO.

THE

"Manufacturer and Builder,"

AN ILLUSTRATED MAGAZINE OF INDUSTRIAL PROGRESS,

Containing 32 large quarto pages, cut, stitched, and bound within an engraved cover, giving subscribers, at the close of the year, a book, when bound, of

384 Pages, with upwards of 300 Engravings.

TERMS, ONE DOLLAR AND A HALF PER YEAR, with liberal discounts to those who may get up clubs. Advertising rates, $3.75 for one half-inch space. Specimen copies free to parties getting up clubs.

Specialties of the Manufacturer and Builder.

The Publishers of THE MANUFACTURER AND BUILDER seek to promote the *diffusion of useful, practical knowledge*, and to furnish to those engaged in the industrial arts a journal which will enable them to keep abreast of the wonderful developments which in these modern times result from the application of science to the arts. The following are a few of the prominent topics which have been discussed in its pages.

ARCHITECTURE.

Every improvement connected with the art of building, whether that improvement relates to beautifying the appearance, increasing the value, strength, and durability, or lessening the cost of erection, finds a legitimate place in its pages.

THE MOTORS—

Steam, water, and wind—in all their various modifications, will receive full attention, and every improvement will be carefully noted and discussed.

SCIENCE APPLIED TO THE ARTS,

As, for example, the application of modern chemical discoveries to dyeing, of electricity to various processes, of magnetism to the examination of iron, have all received attention at the hands of the editors.

THE HOME DEPARTMENT

Is devoted to matters of immediate interest to the domestic circle, whether that matter be of practical or merely general interest. In short, everything of interest to our American homes may here be legitimately discussed.

ILLUSTRATIONS.

In connection with these varied subjects, the journal, during the first six months, contained upwards of 150 illustrations, some of which were of a degree of artistic excellence rarely seen in purely technological journals.

For further particulars, address,

WESTERN & COMPANY, Publishers,
37 Park Row, NEW YORK.

THE

ENGINEERING & MINING JOURNAL

An Illustrated Weekly Periodical,

Intended to advance the interests of those engaged in ENGINEERING AND MINING, in the widest sense of those terms.

ESTABLISHED, MARCH, 1866.

Being the recognized official organ of the American Institute of Architects, the various papers on subjects connected with building, which are from time to time read before the Institute, will be published in its columns.

ENGINEERING.

It contains matter of the highest importance to all who are engaged in

CIVIL ENGINEERING, as in the erection of buildings, the construction of industrial works, public and private, the surveying and laying out of roads, canals, railroads, &c., and the erection of bridges, docks, &c.

MECHANICAL ENGINEERING, as steam engines, hydraulic motors, the construction of tools, machinery, mill-work, &c.

AGRICULTURAL ENGINEERING, as the application of machinery to agricultural processes, and the improvement of agricultural districts by drainage, and various other operations involving an acquaintance with engineering practices.

HYDRAULIC ENGINEERING, as in the planning and construction of water-works, and the improvement of rivers, harbors, &c.

MINING is a subject that receives equal attention with Engineering. The various interests involved in the mining operations of the country, as

The COAL TRADE, the METAL TRADE, and MARKET REPORTS,

wherever they affect these subjects, are fully cared for, while the principles which relate to mining, geology, mineralogy, chemistry, and metallurgy are carefully elaborated, and all new discoveries relating thereto promptly detailed. In the practical departments relating to the working and management of mines, whether of gold, silver, copper, lead, iron, coal, slate, marble stone, oil, salt, &c., will be found not only the latest news, but a full discussion of the best methods of developing these important interests and bringing their products into marketable shape.

The ENGINEERING AND MINING JOURNAL is not strictly a new periodical, as for nearly four years it has occupied a prominent position in the field of journalism under the title, THE AMERICAN JOURNAL OF MINING, which is now presented, re-modeled, improved, and in a new and more attractive form.

CONTRIBUTORS.—Among its Contributors will be found some of the ablest men of the day, and no effort or expense will be spared to make the information conveyed, FRESH, TRUSTWORTHY, and THOROUGH.

ILLUSTRATIONS.—Subjects requiring the aid of engravings will be fully illustrated by cuts prepared by the best artists. Great pains will be taken in this department.

SUBSCRIPTION.—Subscription price, $4 per annum, in advance. Any person sending us the names of four subscribers, with the full subscription rate, $16, will receive an extra copy free. SINGLE COPIES, TEN CENTS EACH.

☞ Specimen copies sent free on application to the Publishers.

Address, WESTERN & COMPANY,

P. O. Box 5969. 37 Park Row, NEW YORK.

News Dealers supplied by the *American News Co.*, 21 Nassau st., New York.

THE PRACTICAL FARMER

AND

RURAL ADVERTISER,

Published Monthly by PASCHALL MORRIS, Editor and Proprietor.

No. 18 N. THIRTEENTH ST., PHILADELPHIA, PA.

Terms, $1.50 *per annum; 20 Copies for* $20, *in advance. Contains* 19 *pages (quarto size) of reading matter,* 4 *columns each, handsomely Illustrated with engravings.*

A PAPER FOR THE FARMER, STOCK GROWER, AND HORTICULTURIST.

POSTMASTERS AND NEWS DEALERS everywhere are authorized and requested to act as agents, to whom suitable show bills will be forwarded when requested.

PREMIUMS to all who obtain new subscribers for the PRACTICAL FARMER. A list of 140 premiums will be sent to any person desiring to act as agent, embracing articles worth from $1.50 to $400, and being for any number of subscribers from three upwards.

Among these articles are all the most valuable books on Farming, Gardening, Horticulture, and Stock Growing; Agricultural Implements, valuable Seeds, blooded Stock, Fowls, Knitting and Sewing Machines, 50 varieties of Chromo Paintings, all at the regular selling prices.

Parties desiring any particular article, and not able to procure the full number of subscribers, may remit the balance in cash.

ADVERTISING RATES,

20 cents per line; quarter of a column, $6; one-third, $8; one-half, $10. Three months, two and a half times these rates.

Send for Circulars or Specimen Copies.

The New Temperance and Home Magazine,

THE GOLDEN RULE.

Edited and Published by MARTHA B. DICKINSON, of the Board of Managers of the Grand Lodge I. O. of G. T., of New York, is strongly endorsed by resolutions of the Grand Lodge, by Grand Lodge officers and other distinguished advocates of the cause, and is warmly commended by the press generally.

It is devoted to the suppression of Intemperance, the exposition and advocacy of the principles of Good Templarism, the Industrial, Intellectual, Social and Moral Elevation of Woman, the Family and the Race, through the dissemination of a Healthful Literature, and the Practical application of the Golden Rule to all the relations of Life.

It is filled with choice Literature, both original and selected, tending to interest, instruct and profit, and ought to find a welcome in every family. Able contributors are regularly employed, and the Proprietor has just offered $100.00 cash Prizes for the Best Stories, Temperance Dramas, Essays, Songs and Music, &c.

Volume 2d commences with the No. for January, 1870, issued in December, 1869, and the *subscription price has been reduced to only* $1.50 *per year!* Twelve copies, and one extra to the person raising the club, for $15.00! Canvassing Agents wanted everywhere. Specimen numbers sent for 10 cts. each.

Subscribe at once, and apply for Agency and Special Terms, and raise a Club, and do good. Address,

MARTHA B. DICKINSON, Olean, N.Y.

THE MINNESOTA MONTHLY

Published at St. Paul, Minnesota, by ROBERTSON & BENTLEY.

This Magazine is devoted to the dissemination of correct information in regard to Minnesota and its developments in Agriculture, Horticulture, Domestic Economy, Social Improvement, and various Useful Knowledge.

The subscription price of this well-established and popular Magazine has been reduced for 1870, to the low price of One Dollar and Fifty Cents, in advance.

It is printed in pamphlet form of same size as the *Horticulturalist*, New York, and the *Gardeners' Monthly*, Philadelphia, Pa., neatly bound, stitched, and cut, and containing not less than thirty-two pages of reading matter, besides a Business Department, from which all but advertisements of reliable Business Establishments are excluded.

In connection with our Magazine we invite attention to

ROBERTSON & BENTLEY'S

MINNESOTA AGRICULTURAL AGENCY,

And Exposition of Stock, Seeds, Implements, and products of the Farm, Garden and Nursery.

All goods warranted; we deal in no other kind.

Orders solicited for Spring, 1870. Office, 261 Third Street.

TO EMIGRANTS, SETTLERS, AND FARMERS!

LAND.

CHOICE FARMING LANDS.

UNSURPASSED WHEAT LAND!

SOUTHERN MINNESOTA R. R. CO.,

Extending from La Crescent, through the counties of Houston, Fillmore, Mower, Freeborn, Faribault, Martin, Jackson, Murray, and Red Wood.

LAND DEPARTMENT.

M. CONANT, Land Commissioner, La Crosse, Wisconsin.

This Company offers Lands of the very best quality, and on terms most favorable to settlers. Their Lands lie in that most fertile region, the southern tier of counties of Minnesota, extending from the Mississippi to the Western Boundaries of the State, and on and near the line of this and other railroads. They include richest prairie lands, a beautiful lake country, and well timbered forest tracts. The climate is as healthful as any in the world. The whole region is being rapidly settled and improved. Lands now held at moderate prices are sure to rise in value with the quick progress of improvement.

Price, $4 to $12 for cash or on credit; when sold on credit, one-fourth down, and the residue in yearly instalments, with interest yearly in advance.

Apply as above, or to

C. H. MAN,
Agent at Winnebago City, Minn.

LAKE SUPERIOR AND MISSISSIPPI
RAILROAD.

The line of this road is from St. Paul, the head of navigation on the Mississippi River, to the head of Lake Superior, a distance of 140 miles. It connects at St. Paul with each of the long lines of railroad traversing the vast and fertile regions of Minnesota, in all directions, and converging at St. Paul.

It connects the commerce and business of the Mississippi and Minnesota rivers, the California Central Railroad, and the Northern Pacific Railroad, with Lake Superior and the commercial system of the great lakes, and makes the outlet or commercial track to the lakes, over which must pass the commerce of a region of country second to none on the American continent in capacity for production.

The land grant made by the government of the United States and by the State of Minnesota, in aid of the construction of this road, is the largest in quantity and most valuable in kind ever made in aid of any railway in either of the American States.

This grant amounts to seventeen square miles or sections [10,880 acres] o land for each mile of the road, and in the aggregate to ONE MILLION SIX HUNDRED AND THIRTY-TWO THOUSAND ACRES OF LAND.

These lands are for the most part well timbered with pine, butternut, white oak, sugar maple, and other valuable timber, and are perhaps better adapted to the raising of stock, winter wheat, corn, oats, and most kinds of agricultural products, than any equal quantity of land in the Northwest.

These lands are well watered with running streams and innumerable lakes, and within the limits of the land belonging to the Company, there is an abundance of water-power for manufacturing purposes.

A glance at the map, and an intelligent comprehension of the course of trade, and way to the markets of the Eastern cities and to Europe, for the products of this section of the Northwest, will at once satisfy any one who examines the question that the lands of this Company, by reason of the low freights at which their products reach market, have a value—independent of that which arises from their superior quality—which can hardly be over-estimated.

Twenty cents saved in sending a bushel of wheat to market, adds four dollars to the yearly product of an acre of wheat land, and what is true of this will apply to all other articles of farm produce transported to market, and demonstrates that the value of lands depends largely on the price at which their products can be carried to market.

THE LANDS OF THIS COMPANY

ARE NOW OFFERED TO

IMMIGRANTS AND SETTLERS

At the most favorable rates, as to time and terms of payment.

W. L. BANNING,
President and Land Commissioner, Saint Paul, Minnesota.

Winona & St. Peter Railroad Company

LAND DEPARTMENT.

500,000 Acres of Land

FOR SALE,

Situated along the line of road which extends from Winona, on the Mississippi River, westerly, via St. Peter, on the Minnesota River, across Southern Minnesota,

(THE GREAT WHEAT-PRODUCING DISTRICT,)

To the Big Sioux River.

The Railroad is now in operation to Janesville, in the County of Waseca, will be completed to Mankato and St. Peter, flourishing towns on the Minnesota River, 135 miles distant from Winona, early the present year, and will be rapidly extended westerly, through a country that is fast being developed by a large and industrious class of settlers, who are annually securing homes for themselves on the liberal terms granted by this Company.

The millions of bushels of wheat annually transported by this Company, is the best evidence of the fertility of the soil of the country tributary to the road, and wherein the lands offered for sale are situated, while the innumerable lakes and water courses with which the country abounds, afford facilities for

STOCK RAISING

Unsurpassed in the Northwest.

The most liberal inducements will be offered parties wishing to purchase. A small cash payment, long credit, and low interest on deferred payments.

For further particulars, or descriptive circulars, call on or address by mail,

H. W. LAMBERTON,
Land Commissioner,
WINONA, MINN.

W. C. BROWN,
Secretary
Land Department.

THE FIRST DIVISION OF THE

St. Paul & Pacific Railroad Company.

LAND DEPARTMENT.

THE COMPANY NOW OFFERS FOR SALE

1,000,000 ACRES OF LAND,

Located along their two Railroad Lines, viz: From St. Paul, via St. Anthony, Anoka, St. Cloud, and Sauk Rapids, to Watab; and from St. Anthony, via Minneapolis, Wayzata, Crow River, Waverly, and Forest City, to the Western Boundary of the State.

THESE LANDS COMPRISE

TIMBER, MEADOW, AND PRAIRIE LANDS,

And are all within easy distance of the Railroad, in the midst of considerable Settlements, convenient to Churches and Schools.

INDUCEMENT TO SETTLERS.

The attention of persons whose limited means forbid the purchase of a homestead in the older States, is particularly invited to these lands. The farms are sold in tracts of 40 or 80 acres and upwards, at prices ranging from $5.00 to $10.00 per acre. Cash sales are always One Dollar per acre less than Credit sales. In the latter case, 10 years are granted if required.

EXAMPLE:—80 acres at $8.00 per acre, on long credit—$640.00. A part payment on the principal is always desired, but in case the means of the settler are very limited, the Company allows him to pay only One Year's Interest down, dividing the principal in ten equal annual payments, with seven per cent. interest each year on the unpaid balance:

	Int.	Prin.		Int.	Prin.
1st payment,	$44.80		7th payment,	$17.92	$64
2d "	40 32	$64	8th "	13.44	64
3d "	35.84	64	9th "	8.96	64
4th "	31.36	64	10th "	4.48	64
5th "	26.88	64	11th "		64
6th "	22.40	64			

The purchaser has the privilege to pay up any time within the 10 years, thereby saving the payment of interest.

The same land may be purchased for $560.00 cash. Any other information will be furnished on application in person, or by letter, in English, French or German, addressed to

LAND COMMISSIONER,

First Division St. Paul & Pacific R. R. Co.,

Saint Paul, Minn.

1870. THE 1870.

ST. PAUL & SIOUX CITY

(LATE MINNESOTA VALLEY)

RAIL ROAD COMPANY,

From St. Paul, via Mankato, to Sioux City, and completed to Crystal Lake, 100 Miles.

A LAND GRANT OF 1,200,000 ACRES.

The Company are now offering for Sale 650,000 Acres of these lands, comprising some of the very finest and most productive Farming Lands in the West, at prices from $5 to $10 per acre.

These lands are the odd sections in the government surveys, and were mostly withdrawn from sale in 1857, the even sections having been largely sold to actual settlers. The even sections within the limits of the Company's Grant can now only be obtained under the Pre-emption and Homestead Laws, not being subject to private entry. The country within which the above lands are situate is generally well settled and improved, with good Roads, School-houses, Churches, and numerous Towns and Villages.

The larger proportion of these lands are rolling and gently-rolling Prairie, with a rich soil and well watered, the lakes and larger streams having generally some timber on their banks, giving a supply of fuel, with the certainty that within two years direct railroad communication will be had with the Iowa coal fields.

Lumber is supplied by railroad directly from the Mills at St. Anthony Falls and the St. Croix River (being the largest lumber marts west of Chicago,) and is furnished at prices much lower than any of the States South or West.

The lands offered are situate in the Counties of Dakota, Hennepin, Carver, Scott, Sibley, Le Sueur, McLeod, Nicollet, Blue Earth, Watonwan, Martin, Jackson, and Cottonwood.

GENERAL TERMS OF SALE.

One-tenth cash, one-tenth in one year, and remainder in four equal annual payments, with interest at seven per cent. in advance. A discount of eight per cent. on nine-tenths of purchase money allowed for cash sales.

All applications for the purchase of lands, or any information regarding them, may be addressed to the

"LAND DEPARTMENT,"

St. Paul & Sioux City Rail Road Company, St. Paul.

OFFICERS OF THE COMPANY.

E. F. DRAKE, President. G. A. HAMILTON, Secretary.
J. L. MERRIAM, Vice-President. H. THOMPSON, Treasurer.

ST. PAUL, MINNESOTA.

MARTINS, KNIGHT & CO.,

STEAM GANG MILLS,

ON RAILROAD TRACK, ANOKA, MINN.,

YARD, CORNER FIFTH AND MINNESOTA STREETS,
And COR. FIFTH & CEDAR STREETS, ST. PAUL,

Manufacturers & Dealers in Lumber

Of all kinds and dimensions.

SASH, DOORS, BLINDS, & TARRED PAPER.

Bills Sawed to order and Lumber delivered by car load at all points on St. P. & P. R. R. and St. P. & S. C. R. R.

G. MUNCH, A. STIERLE, E. MUNCH.

MUNCH BROTHERS & CO.,

Successors to TAYLOR, MUNCH & CO.,

DEALERS IN

LUMBER, LATH,

SHINGLES AND POSTS,

Corner of FIFTH & WABASHAW STREETS,

ST. PAUL, MINN.

Proprietors STEAM GANG MILLS at LAKELAND, Minn.

THE

St. Paul Female Seminary.

This Institution will commence its next school year on the first Tuesday of September, in charge of the undersigned, Superintendent and Proprietor.

We have made such alterations and improvements about the grounds and buildings as add much to their beauty and comfort.

The school year is divided into two sessions: the classes commence and finish certain studies each session, upon which they are examined at its close. The best time to enter the Institution is at the commencement of the session.

The year is further divided into quarters, of ten weeks each, two quarters in each session. All charges for board, tuition, &c., are per quarter.

A full corps of competent and experienced teachers has been employed, and no pains will be spared to afford the young ladies every facility that can be desired in the prosecution of their studies.

Special attention will be given to the musical department.

That our pupils may secure the full benefit of the advantages this Institution affords, and that it may give satisfaction to its patrons, we earnestly request a *prompt and continuous attendance during the whole of each session.*

We are conscious of the responsibility resting upon us faithfully to watch over those committed for the time to our care, and endeavor to exercise such a guardianship as the importance of the trust demands. The surest pledge we can give our patrons that we will in all cases do what we think best for the young ladies, is found in the fact that we are dependent upon their approval for our success and the support of the seminary. If a faithful and conscientious discharge of our duties will secure the confidence of our patrons, then we expect to have in the future, as we have had in the past, that confidence.

We respectfully invite those who are about choosing schools for their daughters, to examine the claims of the ST. PAUL FEMALE SEMINARY before they make their selection, and we feel assured, if you do so, that we shall have our share of patronage.

J. G. RIHELDAFFER,

Superintendent.

ADDRESS,

SAINT PAUL,

Cor. Summit Ave. and St. Peter Street.

ISAAC W. WEBB'S

Livery and Sale Stable,

NEAR WINSLOW HOUSE,

269 THIRD STREET, ST. PAUL, MINN.

Is prepared to turn out the best Horses, Carriages and Buggies in the State; also furnish Fishing, Hunting and Lake Superior parties with Spring Wagons, Tents, &c.

ROBERT HORN,

STONE & BRICK MASON

AND

GENERAL CONTRACTOR & BUILDER.

RESIDENCE—

BLUFF STREET, Upper Town, ST. PAUL, MINN.

Particular attention paid to Building Fire-proof Chimneys.

☞ Orders through the Post Office attended to. ☜

Minnesota Marble Works

ESTABLISHED 1855.

MARBLE MANTELS & FIRE GRATES.

SLATE & IRON & FREESTONE MANTELS

Marbleized all Colors.

ITALIAN AND AMERICAN

MONUMENTS & GRAVE STONES,

Of all designs, on hand and made to order.

DESIGNS FURNISHED.

The TRADE SUPPLIED WITH FURNITURE MARBLE TOPS,

AND

PLUMBERS WITH WASH SLABS,

At trade prices, as cheap as Eastern firms.

Cor. EIGHTH & ROBERT STREETS,

ST. PAUL, MINN.

J. F. TOSTEVIN,

Proprietor.

J. STAPLES,

CONTRACTOR & BUILDER,

No. 57 MINNESOTA STREET,

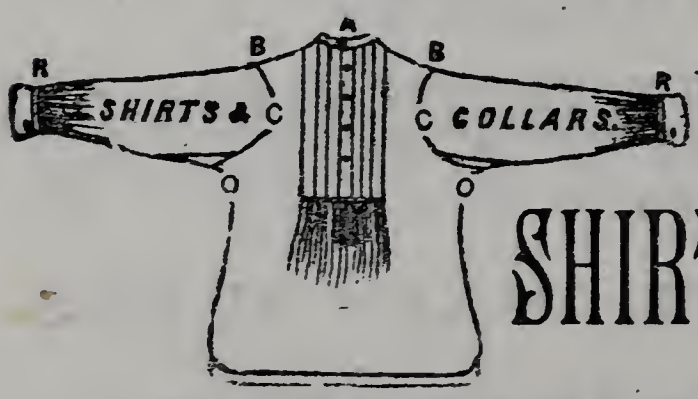
ST. PAUL, MINN.

All kinds of Carpenter and Joiner Work done to order, with neatness and dispatch.

He refers to the following gentlemen, for whom he has done business—

DR. F. R. SMITH,
CAPT. PETER BERKEY,
DR. C. E. SMITH,
CAPT. GEO. T. BROWNING,
HY. WOODRUFF, local ed. *Press*,
JOHN LARKIN,
J. W. MCCLUNG.

C. Z. MATTISON'S



WHOLESALE & RETAIL

SHIRT MANUFACTORY,

No. 24 WEST FIFTH STREET.

All orders promptly attended to. Custom Work made to order, and warranted to give entire satisfaction. Directions for Self-measurement sent by mail, and all work warranted to suit, or the money will be returned.

All kinds of Goods from $2 to $5 per dozen Cheaper than any other Establishment in St. Paul.

REMEMBER THE PLACE—

24 FIFTH STREET, ST. PAUL, MINN.

DAKOTA LAND;

OR,

THE BEAUTY OF ST. PAUL

A HISTORIC AND ROMANTIC WORK OF

ENCHANTMENT IN MINNESOTA,

By Col. HANKINS, Editor of the New York Journal of "Society" and Elegant Arts,

And Author of "Agnes Wilton," "Maniac Father," "The Apostate Quaker," "The Idiot of the Mill," "The Orphan's Dream," "The Banker's Wife," "The Mother's Prayer," "The Beautiful Nun," "Hearts That Are Cold," beside innumerable serial productions of Truth and Fiction.

A Very Interesting, Singularly Beautiful, and Intensely Thrilling Volume of nearly 500 Pages, Illustrated with over 100 Fine Engravings of Descriptive Scenery, Authentic Portraits, and Dramatic Tableaux, all printed on *Cream-Tinted Paper, and in heavy Gilt Binding*. Also added

"A ROUND OF PLEASURE,"

WITH LARGE COLORED MAP, NOTES OF TRAVEL AND TOURIST'S GUIDE TO

THE GREAT NORTHWEST.

PRICE ONLY $3.

CANVASSING AGENTS WANTED EVERYWHERE.

HANKINS & SON, Publishers,

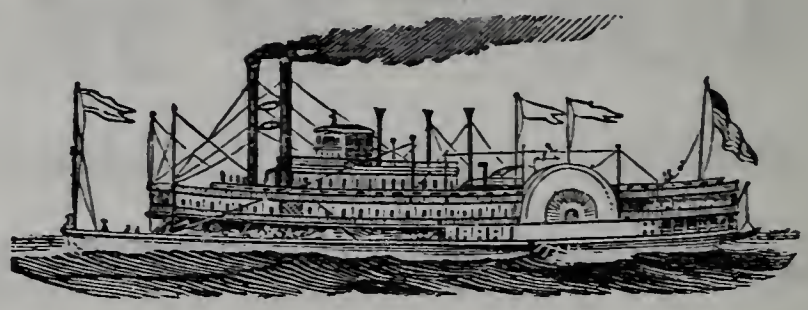
Office of "Society" and the Elegant Arts,

No. 1 Park Place, New York City.

☞ Lady Agents can make money selling this beautiful book, and procuring subscriptions for the *Journal of "Society" and Elegant Arts.*

Send for a sample copy.

Northwestern Union Packet Company



THE SPLENDID STEAMERS

Of this Company will run, during the season of navigation, between

St. Paul, Dubuque, Davenport,

ROCK ISLAND, MUSCATINE, BURLINGTON, KEOKUK,

QUINCY, & ST. LOUIS,

MAKING CLOSE CONNECTIONS AT

DUNLEITH,	with trains of	Illinois Central R. R.
DUBUQUE,	"	Dubuque and Sioux City R. R.
PR. DU CHIEN & McGREGOR,	"	Milwaukee & Prairie du Chien & McGregor W. Railways.
LA CROSSE,	"	Milwaukee & St. Paul Railway.
WINONA,	"	Winona & St. Peter Railway.
ST. PAUL,	"	St. Paul & Pacific R. R., St. Paul & Sioux City R. R., Minn. Central R. R.

Passengers can purchase Through Tickets to all points EAST and SOUTH, at the Offiees of the Company.

W. F. DAVIDSON, President. **P. S. DAVIDSON,** Sup't. **WM. RHODES,** Sec'y and Trea.

Office on the Levee, at St. Paul, Minn.

ESTABLISHED 1858.

H. H. TIMME. A. H. TIMME.

TIMME BROTHERS,

DEALERS IN

Staple and Fancy Groceries,

PRODUCE,

WINES, LIQUORS, AND CIGARS,

CORNER TENTH AND ST. PETER STREETS,

(Near Park Place Hotel,) ST. PAUL.

☞ Everything you want in the Grocery line as low as can be bought in the City, and delivered free of charge.

JAMES CULLEN,

PLAIN AND ORNAMENTAL

PLASTERER.

ALL KINDS OF

Centre Pieces, Brackets, Pendants, Festoons, &c., &c.,

GOT UP TO ORDER.

ALSO

Oil Mastics for Store Fronts & Private Residences.

TENTH ST., near the Capitol, ST. PAUL, MINN.

DANIEL MULLEN,

MASON, BUILDER,

AND

GENERAL CONTRACTOR,

No. 16 SUMMIT AVENUE (near Park Place,)

ST. PAUL.

O. E. GARRISON,

ARCHITECT AND CIVIL ENGINEER,

ST. CLOUD, - - - MINNESOTA.

Land entered, descriptions given from personal examination, Taxes Paid, Plans and Estimates for Buildings furnished. References given when required.

SPENCER & McMAHON,

TANNERS, HIDE AND LEATHER DEALERS,

SAUK RAPIDS, MINN.

LATHROP & KINNEY,

GLENWOOD, MINN.

Buy and Sell Real Estate on Commission, Pay Taxes for Non-Residents, locate Government Lands with Cash, Scrip, or Warrants, and make out Homestead and Pre-emption Papers.

DANIEL PICKET,

Attorney at Law and Real Estate Agent,

HENDERSON, MINNESOTA.

GROVELAND GARDEN AND NURSERY,

Established in 1850,

Half-way between St. Paul and St. Anthony.

SIBERIAN APPLE TREES, EVERGREENS & GREENHOUSE PLANTS,

SPECIALITIES.

GARDEN AND FLOWER SEEDS, by the Paper or Box. None but the best of Stock sent out.

Address, L. M. FORD & CO., St. Paul, Minn.

E. S. BECK. F. ROBERTS. A. RANK.

BECK, ROBERTS & CO.,

FRESCO, SIGN & HOUSE PAINTERS,

GRAINERS,

PAPER HANGERS AND GLAZIERS,

No. 18 WEST FOURTH STREET. - ST. PAUL.

SWAN & BANGS,

ATTORNEYS AT LAW,

LE SUEUR, MINN.

A. C. SMITH,

ATTORNEY AT LAW, and Dealer in Real Estate, locates Land Warrants and College Scrip, Pays Taxes, Buys and Sells Land, and makes Investments on Bond and Mortgage.

FOREST CITY, MEEKER COUNTY, MINN.

JOSEPH WEINMAN,

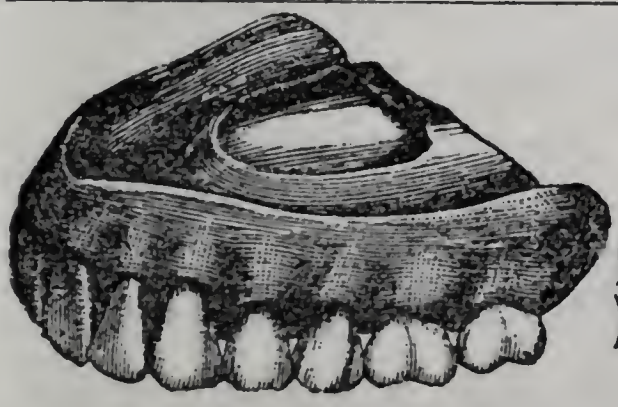
General Fire and Life Insurance Agent,
also Collecting Agent,

CARVER, - - - MINN.

ROBERT H. ROSE,

REAL ESTATE AGENT,

BELLE PLAINE, MINN.



DR. S. A. BEECHER,

SURGEON DENTIST,

OFFICE & DENTAL DEPOT, 196 THIRD ST., ST. PAUL.

The leading Dental Establishment of the State. Dentists supplied at Chicago rates.

THE FARMERS' UNION,

Published Monthly at MINNEAPOLIS, MINN.

Subscriptions, 75 Cents a Year.

The LARGEST General CIRCULATION of any PAPER in the STATE.

The BEST ADVERTISING MEDIUM

IN MINNESOTA.

Great Inducements offered to Getters-up of Clubs.

SPECIMEN COPIES FORWARDED FREE.

Address,

W. A. NIMOCKS, Publisher.

COL. JOHN H. STEVENS, Editor.

ADVERTISE

IN THE

ST. CLOUD JOURNAL

Circulation Double any other Paper in Northern Minnesota.

W. B. MITCHELL, Publisher,

ST. CLOUD, MINNESOTA.

N. F. W. KRANZ, Register of Deeds of Dakota County,

REAL ESTATE BROKER, CONVEYANCER, &c.,

HASTINGS, MINNESOTA.

Farms, Unimproved and Timber Lands throughout the State, and Hastings City Property for Sale. Will attend to the Purchase, Sale and Management of Real Estate, Investments of Money, Collection of Rents, Payment of Taxes in all parts of the State.

St. Paul Box Manufactory and Planing Mill,

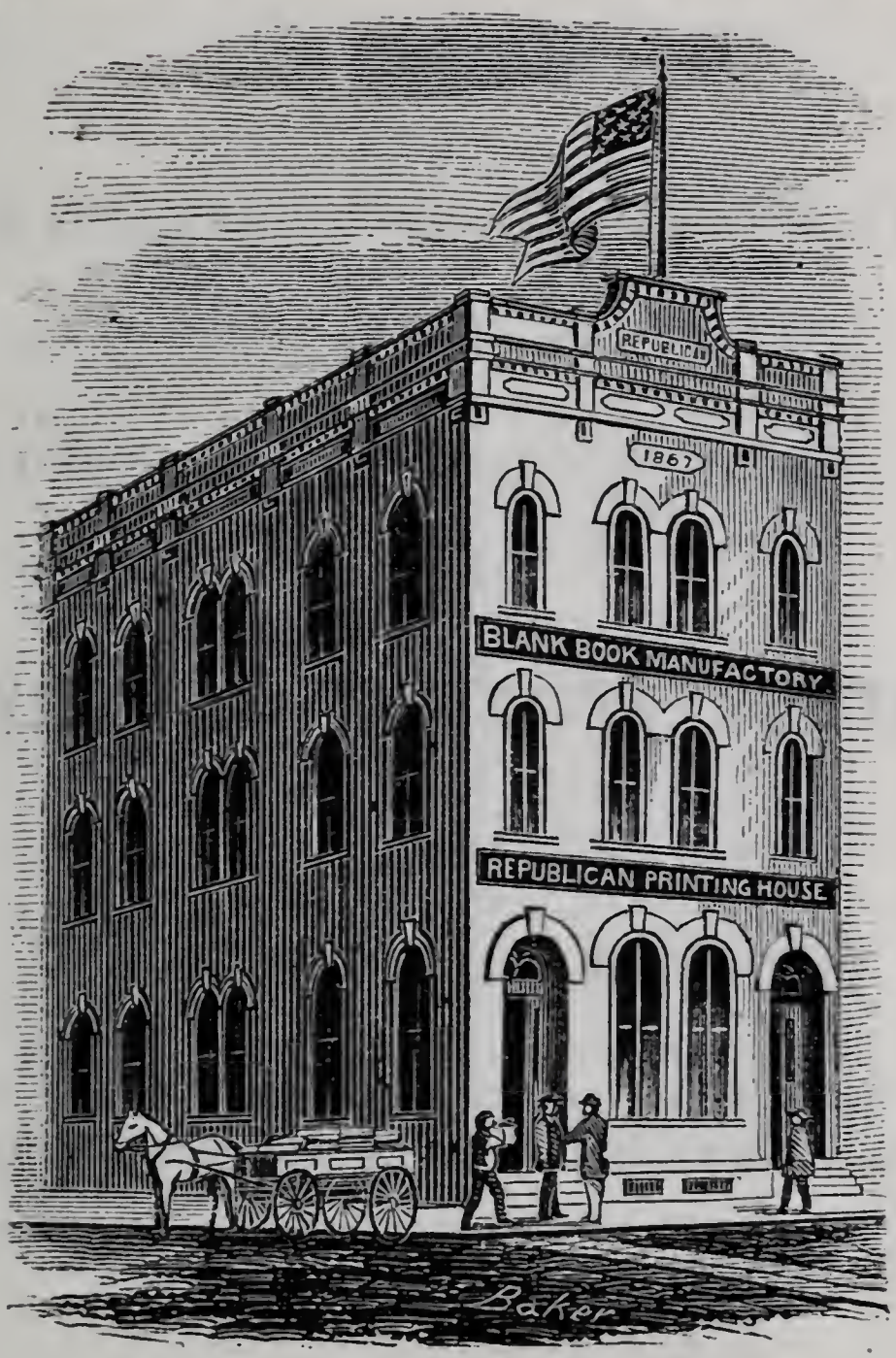
Manufacturing Company's Works, cor. Cedar and Sixth Streets,

J. F. BLODGETT, Proprietor.

PACKING BOXES of all descriptions made to order at short notice.

REPUBLICAN

Steam Printing House.



D. SINCLAIR & CO.

JOB PRINTING,

Bookbinding and Blank Book Manufactory,

WINONA, MINN.

FIRST-CLASS WORK, AT CHICAGO PRICES.

D. SINCLAIR,
W. G. DYE,
JOHN DOBBS.
27

DAILY REPUBLICAN, $9 per Year.
WEEKLY " $2 "
49

THE

Minneapolis Tribune

A REPUBLICAN JOURNAL,

PUBLISHED

DAILY, TRI-WEEKLY, AND WEEKLY,

BY THE

TRIBUNE PRINTING COMPANY.

TERMS OF SUBSCRIPTION:

POSITIVELY—No paper will be sent unless paid for in advance, and all papers will be promptly stopped at expiration of time paid for.

DAILY TRIBUNE.

One Year, by Mail	$10.00
Less than three months, per month	1.00
By Carrier, per month	1.00

TRI-WEEKLY TRIBUNE.

One Year	$6.00	Six Months	$3.00

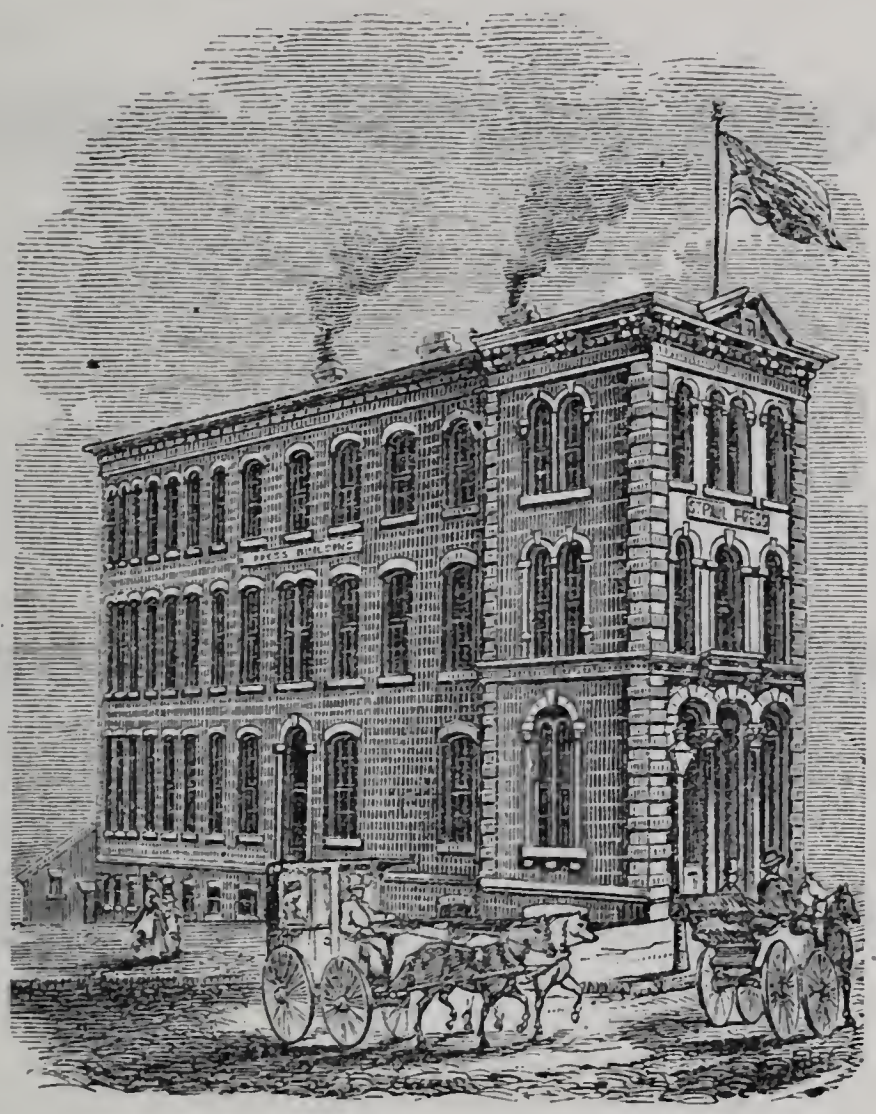
WEEKLY TRIBUNE.

One Year	$2.00	Six Months	$1.00

THE OFFICE OF THE

ST. PAUL PRESS

HAS BEEN RECENTLY REMOVED TO THE



NEW PRESS BUILDING,

Erected in 1869, on the

COR. OF THIRD AND MINNESOTA STREETS,

By the Press Printing Co., for its own exclusive occupancy.

Terms, Cash in Advance.

DAILY, by mail,.....$10 per annum.
TRI-WEEKLY, by mail,..... 6 "
WEEKLY, by mail, ... 2 "
Club rates for Weekly forwarded upon application.

Special attention given to Statistics and all matters pertaining to the development of the State.

Address, PRESS PRINTING CO.,
ST. PAUL, MINN.

THE

ST. PAUL PIONEER.

A DEMOCRATIC NEWSPAPER.

ESTABLISHED A. D. 1849.

The Oldest Newspaper in the State

DAILY, TRI-WEEKLY, AND WEEKLY.

TERMS:

DAILY	$10.00	per Year.
TRI-WEEKLY	6.00	"
WEEKLY	2.00	"

PUBLISHED BY THE

PIONEER PRINTING COMPANY,

SAINT PAUL, MINN.

THE

ST. PAUL DISPATCH.

A REPUBLICAN NEWSPAPER.

PUBLISHED

DAILY, TRI-WEEKLY, & WEEKLY.

DAILY, per Month	$ .70
" per Quarter	2.00
" per Year	8.00
TRI-WEEKLY, per Year	4.00
WEEKLY, per Year	1.00

The Cheapest and Best Paper in the State for the Money.

RAMALEY & HALL.

ALSO

STEAM BOOK AND JOB PRINTERS,

AND BOOKBINDERS,

MINNESOTA STREET, between Third and Fourth,

SAINT PAUL, MINN.

STRANGERS

Visiting St. Paul are cordially invited to the rooms of the

CHAMBER OF COMMERCE,

At the Corner of JACKSON and THIRD STREETS,

Opposite Merchants' Hotel, where will be found a

FREE READING ROOM,

And the leading papers of the latest dates.

J. C. BURBANK, President,
OSSIAN E. DODGE, Secretary.

A CORDIAL INVITATION IS EXTENDED TO ALL,

THOSE GIVING ENTERTAINMENTS

WILL FIND

INGERSOLL HALL

ST. PAUL,

THE EASIEST TO SING IN, IN AMERICA; THE BEST SEATED IN THE STATE; THE BEST VENTILATED THIS SIDE OF ITALY; AND THE BEST LIGHTED IN THE WORLD.

OSSIAN E. DODGE, Sup't.

FIRE EXTINGUISHER.

A Prudent Man Foreseeth the Evil.—Prov. XXII: 3.

Fire destroys annually in the United States, two hundred million dollars worth of property.

Eighty to ninety per cent. of all fires are discovered in their incipiency, but there are no ready means to put them out. Five minutes delay, and the steam fire engines may not control them, and if in season to arrest the flames, the damage by flooding the property with the water is often greater than by fire. Two minutes with the Extinguisher when first discovered would save all. Delay brings ruin. "Prevention is better than cure."

The Improved Babcock Extinguisher

THE

BATE & PINKHAM

ATTACHMENT.

Does away with the lighting of the charge, and secures instantaneous action, by simply pulling a knob.

IS THE CHEAPEST AND BEST PROTECTION AGAINST FIRE.

The Government has adopted it.

Insurance Companies reduce rates where it is introduced. Is charged with Carbonic Acid Gas—the most powerful extinguisher of fire known. Charged in TEN SECONDS—recharged in one minute—throws 40 to 60 feet.

Price, $50.00. Charges, 75 c. each.

☞ SEND FOR CIRCULAR. ☜

The Northwestern Fire Extinguisher Company,

F. W. FARWELL, Secretary.

122 Washington Street, Chicago.

H. J. KOEMPEL,

ARTIST.

PORTRAITS AND OTHER PAINTINGS

Executed in the Best Style of Art,

AT 218 1-2 THIRD STREET.

ORDERS RESPECTFULLY SOLICITED.

ALSO OFFICE OF THE

NEW DERMOPATHIC TREATMENT

(Baunscheidtismus) for the Cure of all

PAINFUL, ACUTE OR CHRONIC DISEASES,

OFTEN GIVING

Immediate Relief, without Medicine or Diet.

OFFICE HOURS 9 to 12 A. M.

CONSULTATIONS FREE.

The above Treatment has cured Sore Eyes, Blindness, Deafness, Neuralgia, Headache, Contracted Limbs, Rheumatism, Intermittent Fevers General Debility, Worms, &c. where all other Treatments have failed to cure.

Summit Avenue House,

SAINT PAUL, MINN.

The Summit Avenue House commands not only one of the Finest Views of the City of St. Paul, but of the surrounding country; the panoramic prospect extending eight or ten miles down the Mississippi, four or five miles up the same river, and fifteen or twenty miles up the broad and beautiful Minnesota Valley, through which, like a silver thread, winds the placid waters of the Minnesota River. Its patrons as a class are not so much of a commercial character as in some other houses, but mostly pleasure seekers—parties of wealth and leisure, who visit St. Paul from the South and East, to enjoy the beautiful scenery, the pure, invigorating air, and fine fishing and hunting.

A few yards in front of the Summit Avenue House, and some two hundred feet above the river, a clear and bubbling spring throws up its five hundred gallons of cool, crystal water per hour, which, by means of a hydraulic ram, abundantly supplies every part of the house. As a romantic feature, aside from its utility, this spring is greatly admired. The house being situated on Summit Avenue, the most shady and beautiful drive that the city affords, and on which are many of the finest residences, adds to its attractiveness.

JAMES O'FARRELL,

CONTRACTOR & BUILDER,

ALSO

HOUSE MOVER.

CONTRACTS TAKEN FOR BUILDING,

And all work done in the most workmanlike manner.

FRAME HOUSES,

Without regard to size,

Carefully Moved, without Injury to the Building.

RESIDENCE--DAYTON'S BLUFF.

Orders through Post Office will be attended to.

SETH FIELDING,

CONTRACTOR & BUILDER,

SHOP, 63 ROBERT ST., ST. PAUL,

(Between Fourth and Fifth Streets.)

Jobbing Promptly Attended to.

☞ *Orders may be sent through Post Office.*

New Method of Washing Clothes without Labor.

ARNOLD'S SELF-ACTING CLOTHES WASHER.

Price Five Dollars. No Rubbing! No Wear! A Saving of Time and Labor! Satisfaction in all cases guaranteed! Territory in Minnesota and Wisconsin for Sale, by GROFF & TEMPLE, PROPRIETORS, No. 44 JACKSON STREET, ST. PAUL, MINN.

JOHN JONES, VETERINARY SURGEON.

Advice, Horse and Cattle Medicines, Liniments, Ointments, &c., may be had at his Dispensary and Hospital,

No. 14 WEST FOURTH STREET, ST. PAUL, MINN.

THOMAS FITZPATRICK,

CONTRACTOR AND BUILDER,

Cor. WABASHAW & EIGHTH STS., ST. PAUL, MINN.

THE GREAT SENSATION DOLLAR STORE,

184 THIRD STREET, SAINT PAUL, MINN.,

A. J. CHASE & CO.

Thousands of useful Articles at the uniform Price of ONE DOLLAR for each Article, or combination of Articles.

CHRIST. KAHLERT,

Dyeing and Scouring Establishment,

348 THIRD STREET (near Winslow House,) ST. PAUL.

Coloring of all kinds of Silk & Worsted Goods, Crape Shawls, Plumes of all Colors, &c., &c.

COMSTOCK, CASTLE & CO.

MANUFACTURERS OF

THE QUINCY STOVES,

100 Patterns and Sizes, Cook, Parlor and Box.

WHOLESALE DEPOT,

187 THIRD STREET, ST. PAUL, MINN.

HENRY A. CASTLE, Resident Partner.

PRENDERGAST & BRO.

Dealers in STOVES AND TINWARE,

163 THIRD STREET, ST. PAUL, MINNESOTA.

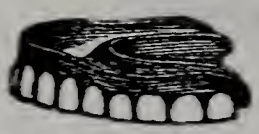
Being Practical Tinners, we are able to do all work in our line Promptly and in the Best Manner.

H. WEDELSTAEDT, M. D.

CONSULTING AND PRACTICING PHYSICIAN.

(TREATMENT HOMOEOPATHIC.)

Pure Medicines for the profession, family and veterinary use, with books, constantly on hand. Orders promptly attended to.



DR. DE MONTREVILLE,

DENTIST,

Office, No. 292 Third Street. Residence, No. 40 Pleasant Street,

ST. PAUL, MINN.

THE SAUK RAPIDS SENTINEL.

Official Paper of the Counties of Benton, Morrison, Sherburne, and Mille Lac.

Is Published every Friday Morning, at Sauk Rapids, Benton County, Minnesota.

Terminus of the First Division of the Saint Paul and Pacific Railroad.

The great water power now being improved and made available at this point; the large amount of the choicest Government land open to homestead entry, within a very short distance of the town; the rapid settlement of the four counties above named, by substantial, sturdy, and reading farmers, makes the SENTINEL—which has a larger circulation in those counties than all other papers put together—the best Advertising Medium in Northern Minnesota.

BENEDICT & GILPIN, Proprietors.

N. BURES,

Catholic Book Store,

Street Adjoining the German Catholic Church,

ST. PAUL, MINN.,

Keeps constantly on hand the best assortment of Prayer and Religious Books; also of Rosaries, Crucifixes, Vessels for Holy Water, Medals, Pictures, &c.; also a great selection of

GERMAN & ENGLISH SCHOOL BOOKS.

He also has a large Stock of Church Ornaments and Paraments of the best kind, consisting of Pixes, Chalices, Ciboriums, Censers, Chasubles, Velas, Stolas, &c.

N. BURES, ST. PAUL, MINN.

N. B.—ALL ORDERS PROMPTLY ATTENDED TO.

Will Remove in September, 1870, to Eighth Street, adjoining the new German Catholic Church.

A. ST. CLAIR,

PHOTOGRAPHER,

184 THIRD STREET,

ST. PAUL, - - - MINNESOTA.

ONLY ONE STAIR.

Photography in all its branches, Colored or Plain. Special attention paid to Children and Copying. Cloudy weather no objection.

Minnesota and other Views constantly on hand.

OFFICE OF

DR. SAM. WILLEY,

PLEASANT STREET, NEAR STATE STREET,

ST. PAUL, MINN.

OFFICE HOURS, 2 to 6 P. M.

S. P. & J. C. HALL,

LAWYERS AND COLLECTORS,

MINNEAPOLIS, MINNESOTA.

Practice in all the State and United States Courts.

REFERENCE BY PERMISSION.—W. P. Westfall, Cashier National Exchange Bank, Minneapolis; R. J. Baldwin, Cashier State National Bank, Minneapolis; H. B. Claflin & Co , New York; John V. Farwell & Co., Chicago; J. D. Easter, Manufacturer of Marsh Harvester, Chicago; Bradford Brothers, Milwaukee.

Special attention given to Collection of Claims, Payment of Taxes, and Examination of Titles for Non-residents. Money Loaned so as to Nett the Loaner 12 per cent.

THOSE GIVING ENTERTAINMENTS

WILL FIND

INGERSOLL HALL

ST. PAUL,

THE EASIEST TO SING IN, IN AMERICA; THE BEST SEATED IN THE STATE; THE BEST VENTILATED THIS SIDE OF ITALY; AND THE BEST LIGHTED IN THE WORLD.

OSSIAN E. DODGE, Sup't.

DENTISTRY

DR. J. H. BRYANT'S

TERMS FOR PROFESSIONAL SERVICES.

First-class Gold Fillings.....	from	$2.00	to	$20.00	each.
Tin Foil or Silver Filling.....	"	1.00	to	4.00	"
Extracting Tooth or Root.....	"	.50	to	1.00	"
Cleaning and Polishing Teeth.....	"	1.00	to	4 00	"

ARTIFICIAL TEETH

Inserted in Gold. Silver, and Rubber base, in the most scientific manner, and at reasonable prices. A large Stock of Teeth always on hand for selection.

Tooth Powder and Wash for Sale.

Office and Residence,

68 JACKSON STREET, ST. PAUL, MINN.

ALFRED SEDERBERG,

Landscape and Portrait Painter,

STUDIO IN FOREPAUGH BLOCK, ST. PAUL, MINN.

Photographs and Daguerreotypes enlarged and painted all sizes. Large collection of Minnesota Landscapes on hand.

CHARLES MARCOTTE,

ARCHITECT & SUPERINTENDENT,

ST. PAUL, MINN.

Plans and Specifications for all kinds of Buildings.

A. F. KNIGHT,

ARCHITECT & SUPERINTENDENT

WABASHAW STREET, ST. PAUL, MINN.

Plans and Specifications for all kiuds of Buildings.

A. M. RADCLIFF,

ARCHITECT & SUPERINTENDENT,

FOREPAUGH'S BLOCK, ST. PAUL, MINN.

Plans, Details, and Specifications of Public or Private Buildings furnished to order promptly and satisfactorily.

R. L. WHARTON'S

CARRIAGE & SLEIGH MANUFACTORY,

108 *JACKSON STREET, ST. PAUL.*

MINNESOTA STEAM BOILER WORKS.

T. KENNY & CO., Proprietors,

Manufacturers of Steam Boilers, portable and stationary, Smoke Stacks and Britchens, Lard Oil and Soap Tanks, Brewer's Kettles, Iron Shutters, and all kinds of Boiler Plate and Sheet Iron Work.

Repairing in all its branches promptly attended to; satisfaction guaranteed.

SHOP—ON WACOUTA STREET,

Near St. Paul & Pacific R. R. Depot, ST. PAUL, MINN.

J. W. McCLUNG,

ATTORNEY AT LAW,

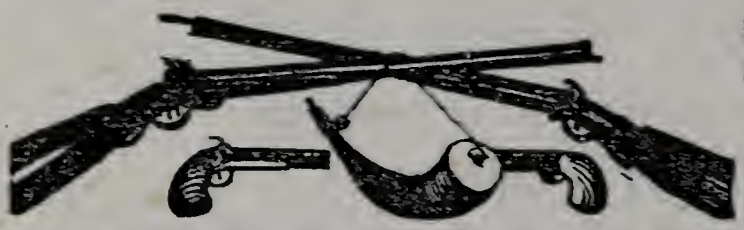
22 SUMMIT AVENUE,

(NEAR PARK PLACE HOTEL,)

ST. PAUL, MINN.

MONEY INVESTED. References furnished Correspondents in any part of the Country, North or South.

Originally from Maysville, Kentucky. Fifteen years a resident of St. Paul.



MARTIN F. KENNEDY,

Manufacturer of and Dealer in

GUNS, RIFLES, PISTOLS, AND SPORTING APPARATUS,

CUTLERY, FISHING TACKLE, &c.,

157 THIRD STREET (Catholic Block,) ST. PAUL, MINN.

REPAIRING PROMPTLY ATTENDED TO.

Best Breech and Muzzle-Loading Shot Guns made to order. Muzzle-Loading Shot Guns altered to Breech-Loaders. Guns Restocked to any Bend, Length, or Pattern.

D. L. CURTICE, CITY ENGINEER. J. T. HALSTED.

CURTICE & HALSTED,

CIVIL ENGINEERS,

FOREPAUGH BLOCK,

SAINT PAUL, MINNESOTA.

J. S. SEWELL,

CIVIL ENGINEER,

ST. PAUL, MINNNESOTA.

CHAS. M. BOYLE'S

LAND AGENCY,

SAINT PAUL, MINNESOTA.

ESTABLISHED 1856.

Land Surveyor and General Agent.

Address,

CHAS. M. BOYLE,

ST. PAUL, MINNESOTA.

L. B. WAIT,

IMPORTER AND DEALER IN

GARDEN, FIELD, & FLOWER SEEDS,

FLOWERING BULBS,

Guano, Plaster, Marble Dust, Cement, Lime, Plastering Hair, Fire Brick, Fire Clay.

Bags, Flour Sacks, Twines

AND SARATOGA SPRING WATERS,

Flour Sacks Manufactured and Printed to order,

15 WEST FOURTH STREET, Near JACKSON, One Square from the MERCHANTS' HOTEL,

ST. PAUL, MINN.

CARPET HALL.

J. MATHEIS,

DEALER IN

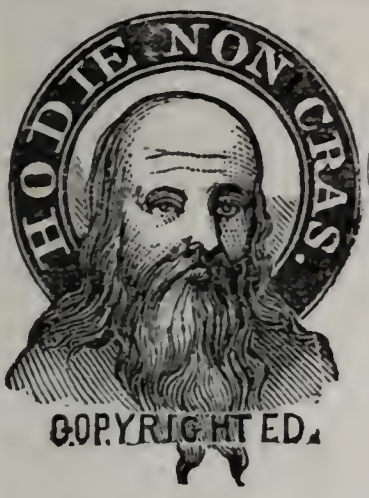
CARPETS, OIL CLOTHS,

WALL PAPERS, WINDOW SHADES,

Damask, Lace, and Muslin Curtains,

Mattresses, Lounges, and all kinds of Upholstery Goods, prime Live Feathers kept constantly on hand.

No. 246 THIRD STREET, ST. PAUL.

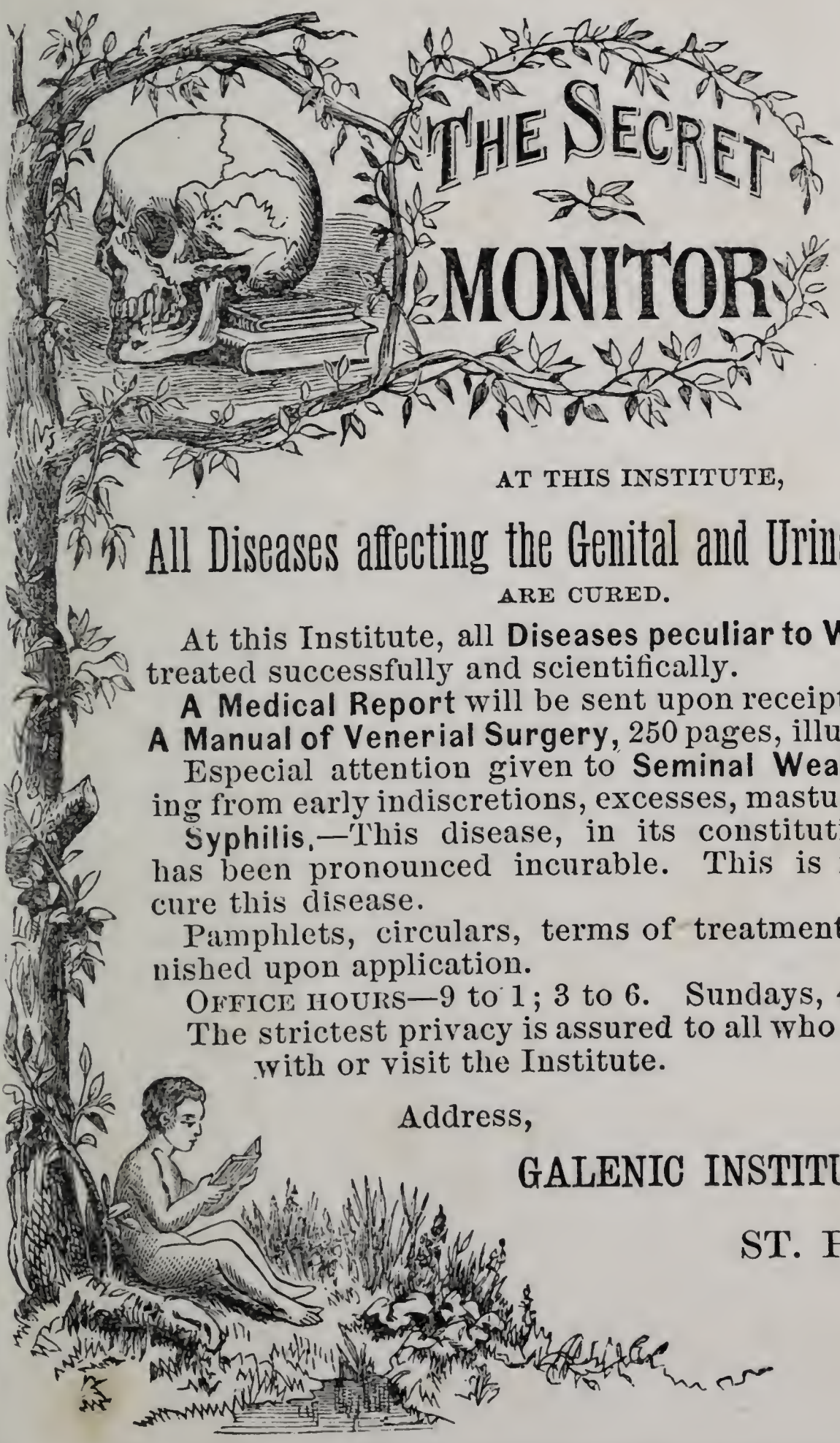


THE

Galenic Institute,

OPPOSITE WINSLOW HOUSE,

ST. PAUL, - MINNESOTA.



This Institute is Chartered by Legislature.

AT THIS INSTITUTE,

All Diseases affecting the Genital and Urinary Organs

ARE CURED.

At this Institute, all **Diseases peculiar to WOMEN** are treated successfully and scientifically.

A Medical Report will be sent upon receipt of 10 cts.

A Manual of Venerial Surgery, 250 pages, illustrated, $2.

Especial attention given to **Seminal Weakness**, arising from early indiscretions, excesses, masturbation, &c.

Syphilis.—This disease, in its constitutional form, has been pronounced incurable. This is not so: we cure this disease.

Pamphlets, circulars, terms of treatment, etc., furnished upon application.

OFFICE HOURS—9 to 1; 3 to 6. Sundays, 4 to 5 P. M.

The strictest privacy is assured to all who correspond with or visit the Institute.

Address,

GALENIC INSTITUTE,

ST. PAUL,

MINN.